# *Intellectual Creation and Commercial Value : are Copyright and Droit d'Auteur viable in light of information technology ?*

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*I can declare that this has been composed by myself alone and that the work which enabled it to be produced was carried out by myself alone.*

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## *Abstract*

This research determines the fundamental rationales, principles of copyright law and *droit d'auteur*, in order to ascertain whether these legal mechanisms or institutions are viable in the light of information technology. Moreover, the analysis is directed towards the determination of the emergence of intellectual property rights in their cultural, economic, historical, political and legal relation to technological change. It is argued that none of the current intellectual property mechanisms are viable in the light of information technology. Further, only the fundamental rationales of *droit d'auteur* would appear to respond adequately to the challenges of the information age under a new concept of authorship.

The inadequacies of the current intellectual property institutions and information technology derive from the manner in which intellectual property rights emerge. Legal rights ought to be the spontaneous product of individual claims and the basis of a system of voluntary interactions, where legal institutions, such as intellectual property, validate common practice instead of dictating it. As a result, it is demonstrated that as opposed to early intellectual property systems which emerge out of individual claims, modern copyright law dictates the emergence of rights by granting to authors property rights in commodities. By contrast, *droit d'auteur* rationally secures property rights in works as a simple recognition of authors' rights in their work, being thus independent of technologies which the attribution of copyright revenues.

Following this line of thinking, markets are systems for consensual exchange of owned goods which are intended to encourage individuals to make productive use of resources. Since works of the mind produce externalities which prevent markets from forming efficiently, copyright is sought to provide incentive for the production of the optimal amount of information. However, it is argued that the current intellectual property mechanisms which substitute for consensual markets present the major problem of being only static substitutes for dynamic markets. Such poor market mimics can deal with exchanges of works in tangible form but are completely inefficient in electronic milieu.

Added to that, current copyright mechanisms are more concerned with trade related issues than authorship as such. There lies a dilemma between property rights of authors in their work and property rights of the industry as a form of return in investment. It is also argued that in essence the digital environment is not the root of the problem but the current diversion of the purpose of copyright. As such the protection of computer programs by copyright is a vivid proof of the issue. An economic, social and political analysis of the effects and needs of an information society shows that intellectual property needs to redefine its concepts of authorship in approaching problems of technological change. Further, it is contended that *droit d'auteur* has all the fundamental qualities to prove that authors' rights are not dead.

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# *Introduction*

*"The past has revealed to me how the future is built"*

- Teilhard de Chardin

The aim of this research is to determine the fundamental rationales of intellectual property rights, and especially copyright law and *droit d'auteur*, in order to ascertain whether these legal institutions are viable in the light of information technology. In essence, the research is directed towards the determination of the emergence of intellectual property rights in their cultural, historical, political and legal relation to technological change. This contribution will argue that neither of the two copyright paradigms are viable in the light of information technology; however, the fundamental principles of *droit d'auteur* would appear to respond adequately to the challenges of the information age in the form of a new concept of authorship.

Such a contention may appear unduly adventurous to those who would argue that the intellectual property system has so far responded well to technological changes. Today, however, information technology is complicating this process and undermining many of the mechanisms that have governed the system. Moreover, this trend is likely to continue since today's information technology is not only at its early development but is also becoming steadily more sophisticated as well as more powerful. In other words, a new revolution, the information revolution, is at its beginning whereby many technologies, such as computer facilities, satellite communications and other devices are playing an essential role. As a result, the greatest impact will not come from one single technology but rather from the use of a combination of technologies. This is what represents information technology, a combination of interrelated technologies as opposed to the single technology, the printing-press. In this research, I will refer especially to the information infrastructure, the Internet. Because it represents a high capacity multi-media carrier where broadcast, messaging and database communication models merge, this infrastructure will illustrate the current reach of the technology as well as the direction in which it is likely to grow.

In looking at how information technology affects the intellectual property system, it is necessary to conceive of the system as interrelated sets composed of incentives and rewards designed to influence the creative behaviour of individuals, of mechanisms to enforce these incentives, and of individual transactions and creative activities. Therefore, the system is made up of mechanisms and the relationships that these mechanisms generate between society and the system. As such, the out-puts of the system provide a feed-back about how well the system works. Moreover, these sets are governed by the goals towards which the system is directed; as such they ought to reflect society's goals. Accordingly an intellectual property system evolves out of a combination of individuals' needs, historical circumstances, and political compromises. In order to help to reach these goals, the system produces certain incentives and rewards which are integrated within a system of operating rules enforced by defined mechanisms. More importantly, social, political and technological changes may alter intellectual property goals and one may expect that, as the goals change, other parts of the system ought to change correspondingly. Although national legislatures have had to reckon with technological change, information technology is challenging the intellectual property system in a way that may require substantial changes in the system. Once a relatively slow process, technological change is now outpacing the legal structure which has governed the system and creating unprecedented pressures on legislatures to adjust the system in order to accommodate these changes. The question which remains is what necessary adjustments are required in order to accommodate information technology.

The intellectual property system regroups a number of different parties who all express a wide range of concerns. Such concerns reflect opposing claims which put enormous pressure on the system itself. On the one hand, authors, publishers and many other copyright holders hold different views on the measures which need to be taken. However, they are all looking for measures to protect not only their income but also their intellectual creations. Representing the dilemma of the new technology, producers of computer programs, databases and other functional works look at the inadequacies of the current system in protecting their products. To that effect, conflicts arise between the creative and industrial worlds as to what intellectual property, and especially copyright institutions, ought to protect. Also, manufacturers of information technology products have an interest in the future development of intellectual property since it influences directly the future development of information technology products. On the other hand, a new sense of privacy as well as a more liberal approach to access information is advocated by users. The general public is becoming accustomed to access in the privacy of their homes or offices an increasing

number of works at the click of a computer mouse. Scholars and scientists express the need to make intellectual resources and materials as accessible as possible in order to carry out their work. Also, at a trans-national level, many countries need intellectual property products and may perceive the new technology as a mixed blessing. Indeed, the technology facilitates the social, economic and political development but also offers the prospect of increased centralisation and power of industrialised countries. As such there are legitimate concerns which need to be weighted against national intellectual property interests. Above all, information technology brings new parties to the debate who may not recognise themselves in these two broad categories. These people may represent a new generation of people who have grown up with the technology itself and have already been empowered with the many opportunities which information technology offers. As such, the technology is changing the role of each party to become an interactive as well as a multiple one. A re-evaluation of copyright institutions prompts a re-assessment of their purpose in the light of these concerns.

This research will not use a comparative approach to copyright law and *droit d'auteur,* that is, merely comparing the rules that constitute the law of the moment of each particular system. If one remains at the level of comparing rules, no legal system is the same to any other, including systems from the same legal tradition. What I will do in the following thesis is different. I will compare the rationales and principles under which the rules were created. My opinion is that the existing differences between copyright institutions in common law and civil law countries should be sensibly comparable since both intellectual property systems evolve out of identical social, political and economic constructs. As a result, I will try to ascertain how these principles, which are further operationalised in the form of legal rules and doctrines, ultimately shape copyright institutions in order to determine whether copyright law and *droit d'auteur* are viable in the light of information technology.

Using the above methodology, *Chapter 1* determines how intellectual property rights emerged before our modern concept of copyright. It is demonstrated that in Greek and Roman times the concept of intellectual property was the spontaneous product of individual claims and the basis of a system of voluntary interactions, where legal institutions validated common practice but did not dictate it. In similar fashion, the law embraced in medieval and renaissance time the development of new processes, and in particular the printing Press. From that point, intellectual property started crystallising itself in a more rigid form. The technology, and especially the commercial value it involves, influenced the emergence of intellectual property rights

in such a way that the rights became the creation of the state rather than a matter of individual claims.

*Chapter 2* and *Chapter 3* examine the emergence of copyright rationales in their modern form where the state takes a preponderant role in attributing rights. It is established that copyright law, unlike its continental counterpart, grants a temporary commercial security attributed to authors or their assigns as commodities. An examination of both systems shows that copyright law is based upon two fundamental principles: a temporary commercial monopoly balanced by the public domain. By contrast, *droit d'auteur* simply secures the right of authors in their own creations independently from any form of technology. As a result, the system evolves out of three fundamental principles: authorship, public domain, and temporary commercial monopoly. U.S. copyright law is considered as an illustration of both systems since it characterises a hybrid system which is full of teaching and importance in analysing the viability of copyright institutions.

*Chapter 4* is concerned with the emergence of property rights, and especially market formation in products of the mind. Markets are systems for consensual exchange of owned goods which is intended to encourage people to make productive use of resources. Since it is believed that markets in works of the mind do not produce that optimal amount of information, intellectual property is intended to provide incentive for the production of the optimal amount of information. However, it is demonstrated that intellectual property as an intermediary for market formation does not recognise markets as a dynamic form of exchange. In other words, intellectual property does not internalise correctly impediments to consensual exchanges, and even creates some. As a result, since information technology, and especially the information infrastructure, plays in itself the intermediary in a dynamic fashion, it is argued that intellectual property should aim not to correct market deficiencies but rather concentrate on protecting the inherent value of works of the mind produce optimal.

As a rejoinder to the preceding chapter, *Chapter 5* looks more specifically at the inherent value of works of the mind, and especially at the dilemma between intellectual creation and commercial value. In order to demonstrate what ought to be protected by copyright in electronic milieu, this chapter analyses the application of copyright protection to computer programs. In using that example, it is argued that only the intellectual value, based on differentiation, ought to be protected by intellectual property rights in a digital environment; thus works of function such as computer programs are not fit for copyright protection.

Finally, *Chapter 6* looks at the crucial role of information in the information age and the competing claims which rise along with new opportunities. It is argued that the rise of information technology changes society's goals. Since copyright institutions are directed towards these goals and serve the purpose of balancing competing claims, the institutions ought to change in response. Above all, it is shown that intellectual property as the product of certain social interactions is in search for a new concept for authorship which mirrors the very nature of society.

## *Chapter I*

## FOUNDATIONS *of* INTELLECTUAL PROPERTY

> "*Copyright has always existed, but it did not enter from the very start into legislation*"
>
> - Eugène Pouillet*

Authors and inventors have always been highly regarded for their contribution to society. In consequence, concepts of property in products of the intellect have always existed as far as human memory can recall.

However, it is difficult to find evidence of the concept of intellectual property during antiquity. Careful choices have to be made as to the relevance of sources available. In that respect, I have limited my research to the Greek and Roman times since it is possible to trace tangible evidence of the importance of intellectual endeavours as well as the importance of centres duplicating manuscripts for trade. It should be stressed, however, that intellectual property was not attached solely to production of manuscript or books. In fact, the concept of intellectual property does not stem from any material literary production in the Greek or Roman time. As a result, precise and descriptive sources can be found from Greek and Roman writings on many aspects of intellectual life and in concepts of property in works of the intellect developed in that times. Furthermore, the Greeks and the Romans are our ancestors in many other ways and have influenced deeply our own ways of thinking

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* Eugène Pouillet, *Traité théorique et pratique de la propriété littéraire et artistique* (Paris, 1908), at 2, Hereafter: [Pouillet, 1908]

and acting, and especially our modern concepts of intellectual property. With the introduction of printing, the concept evolved in such a way that it created a parallel concept, a privilege of literary property which in effect narrowed down the concept of intellectual property. Property in an intellectual creation is derived from property in a material creation. As a result economic rights were based upon tangible forms of expression and considered solely as commodities in order to enforce the rights. In effect, this concept led to a restricted concept of authorship where economic rights are well asserted and where moral rights are controverted.

This chapter will show how early intellectual property rights emerged as the spontaneous product of individual claims and the basis of a system of voluntary interactions, as opposed to the Renaissance period following the invention of the Press. Beyond utilitarian and historical curiosities, there exists a philosophical and social order which explains why the early development of intellectual property could not dictate the emergence of rights but only validate common practice. Creativity is a complex process influenced by many interactions, which involves creative people, technical tools and information resources. Careful attention will be given to the complex interaction which exists between the creative process and society.

## ADVENT OF INTELLECTUAL PROPERTY

For centuries, Greece was supreme in matters of the spirit and the intellect. At the very beginning of their history, the Greeks already possessed the *Iliad* and the *Odyssey*. Ancient Greek society can be characterised by the predominance of

philosophical thought, pure science and literary endeavours.[1] They had created tragic theatre with Aeschylus, Sophocles and Euripides, comic theatre with Aristophanes, and learned history with Herodotus and Thucydides. Socrates and his disciples, Plato and Xenophon followed by Aristotle, had given brilliant demonstrations of logic in the original form of dialogues. From the fourth century B.C. onwards to the Roman conquest, such great writers and philosophers formed the heyday of hellenism. Nonetheless there was nothing that could be described as a legal system for the protection of literary and artistic productions. It is essential to realise that intellectual endeavours which reflected Greek communities' values and goals were not primarily expressed in writing. Paul Cartledge remarked:

> "All literature [...] in the basically oral societies of Greece was typically heard and not read."[2]

The philosophical and political context was the fundamental principle of freedom of speech reflected in the capacity of citizens for self-expression or for rational speech. Moreover, this fundamental principle sustained an organisational system where citizens wielded the power and constituted both the state and society all in one.[3] Therefore the number of written copies of any work available for the use of the general community, if any existed at all, must have been limited even though these citizen-speakers are well-known. In fact, before the establishment of the great library of Alexandria as a centre of manuscript production, no such thing as a public library

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[1] There are problems of generalisation. Classical Greece did not form a single society even though it was a single culture. The Hellenistic world englobed many cities or human communities called *pólis*. Among them Athena polarised attention due to its leading cultural, intellectual and political power, see Paul Cartledge, *The Greeks A portrait of Self and Others*, (Oxford University Press, 1993), at 8 Hereafter: [Cartledge, 1993]

[2] *ibid*, at 10.

[3] Paul Rahe, *Republics Ancient and Modern: Classical Republicanism and the American Revolution*, (The University of North Carolina Press, 1992), at 35, Hereafter: [Rahe, 1992]

can be traced.[4] Greek cultural and political life was simply based upon oral expression.

In Greek time, writers often regarded themselves as teachers like Socrates and Plato, or as practical philosophers like Euclid. Their perception of literary property was therefore really different to our modern concepts of intellectual property. The author's ambitions appears to have been satisfied when his work received in his own immediate community the honour of dramatic presentation or of public recitation.[5] Authors seem to have produced intellectual endeavours without any thought of material compensation but only as their own duty to their city. Aristotle noted that the ancient law-giver Hippodamus of Miletus, born around 500 BC, had proposed a law that any person who discovered something of advantage to the state should "receive honour".[6] But the proposal seems to have never taken shape in law. Moreover, Greek societies were unlikely to grant any patent monopoly even though no laws could have prevented it.[7] Nonetheless, Aristotle himself despised monopolies even as incentives and considered them as "an art often practiced by cities when they are in want of money".[8] Plato took the same attitude towards money. Wealth according to Plato "is but a means to higher things and we should abandon its unlimited and irrational

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[4] Franck A. Mumby, *Publishing and Bookselling*, (London, 1930), at 15, Hereafter: [Mumby, 1930]

[5] This tradition dominated also the structure of the Roman public and literary life. Ancient literature had always been intended to be spoken or sung, see Erich Auerbach, *Literary Language and Its Public, in Late Latin Antiquity and in the Middles Ages* (London, 1965), at 246, Hereafter: [Auerbach, 1965]

[6] Aristotle, *Politica*, I, 1268a.

[7] There is a story of the Sybarites who supposedly gave monopolies to those of their cooks who invented a "peculiar and excellent" dish, Phylarchus about 300 BC, quoted by Athenaeus, *Deipn.* XII, 521,c,d, cited in Frank D. Prager, *The Early Growth and Influence of Intellectual Property*, 34 Journal of the Patent Office Society 1952, at 114, Hereafter: [Prager, 1952]

[8] Aristotle, *Politica*, I, 1259.

pursuit".[9] Conceivably money-making is the aim of securing monopolies and would therefore distract from a vocation. Their attitude can be clearly illustrated by the nature of Greek societies. The city was a political community constituted by citizen-men who devoted their time and efforts to speech and public actions.[10] As a result:

> "all genres of Greek public discourse, whether lyric and elegiac poetry, epinian odes, tragedy, comedy, history, oratory or political theory, did indeed privilege the public, communal, political sphere above the private and the personal."[11]

Dramatic performances and recitations of public reciters, called *rhapsodists*, were the principal means of political action which should be free from any pressure.

Plato and Aristotle were not the last to consider music and poetry in such political fashion. The psychological preparation of a young man needed the study of poetry, music and discourse in the assumption of his duties as a citizen and soldier.[12] Therefore, free use of the products of the mind in teaching and collection of ideas needed to be free of any circumvention. Plato, for instance, was opposed to any promotion of what is considered in our modern times the useful arts or fine arts. In the *Republic* the ideal state does not give room for political or industrial development but only for scientific research.[13] Furthermore, Plato had no illusion about perpetual progress so popular in the *laissez faire* period. He gave his opinion as follows:

> "In short, then, those who keep watch over our common wealth must take the greatest care not to overlook the least infraction of the rule against any innovation upon the established system of education either of the body or of the mind. When the poet says that men care most for "the newest air that hovers on the singer's lips", they will be afraid lest he be taken not merely to mean new songs, but to be commending a new style of music. Such innovation is not to be commended, nor should the poet be so understood. The introduction of novel fashions in music is a thing to be aware of as endangering the whole fabric of society, whose most important conventions are unsettled by any revolution in that quarter."[14]

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[9] Plato, *Res Rep.* IV 424
[10] [Rahe, 1992], at 32.
[11] [Cartledge, 1993], at 91.
[12] [Rahe, 1992], at 126.
[13] Plato, *Res Rep.* IV 421.
[14] *ibid*

Aristotle, following the same line of thinking, added a more political and economic approach to the evil of monopoly. Discussing the plans of Hippodamus, he remarked critically that search for monopoly as a form of recognition may lead to abuses in the legal and constitutional field, in other words corrupts the political community and affects its freedom of self-expression. Cautiously, Aristotle preferred stability to any development in that sense.

Nonetheless, the Hellenistic world was not entirely powerless in repressing literary piracy. Invited to a contest in Alexandria during the reign of the Ptolemeis, Aristophane (c. 257 - 180 BC), the grammarian, sitting on the jury of a contest in Alexandria "when his opinion was asked, voted that the first place should be given to the candidate who was least liked by the audience".[15] Asked to explain the reasons for his judgement, he demonstrated that the other contestants' contributions were copies of existing works. The king then ordered them to be brought to trial for theft "and thrust out of the city".[16] Another instance in the Greek literature tells of the condemnation by several ancient authors of Hermodorus, one of Plato's disciples. It is reported that Hermodorus, attending his master's lectures, took some notes and brought them to Sicily in order to sell them.[17] This case may be interpreted as the recognition of the right of divulgation which belongs only to the author or simply the reproval of Hermodorus's intent to make money at the expense of somebody's work.

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[15] "Aristophanes vero, cum ab eo sententia rogatur, eum primum renuntiari iussit, qui minime populo placuisset", Vitruvio, *De Achitectura*, Book VII Preface.

[16] "Itaque rex iussit cum his agi furti condemnatosque cum igniominia dimisit", Vitruvio, *De Achitectura*, Book VII Preface.

[17] "Die mihi, placetne tibi primum edere iniussu meo? Hoc ne Hermodorus quidem faciebat, is qui libros solitus est divulgare, ex quo..." (Come now, in the first place do you approve of publishing without my instruction? Even Hermodorus didn't do that, the man who used to broadcastPlato's books), Cicero, *Letters to Atticus*, Book XIII, 21, Arpinum 30 June or 1 July B.C. 45; see also Book XI.

In my opinion, the lack of clear legal sanction by Attic laws is not a sufficient objection to the recognition of the notion of property in speech. As a matter of fact, literary enlightenment by means of written works came only for later generations and solely in support of speech in its early development. Importance must be given to the term intellectual property in relation to what is protected. I would argue that intellectual property serves to denote an object of legal and moral right which is not in the public domain. In Greek times, intellectual property was not defined as such under laws; however, in considering the importance of the public domain in Greek communities, protection of the moral rights of authors were most certainly affirmed as a fundamental form of freedom of political expression.

The library of Alexandria, which was the first important manuscript or tablet-producing market of the Hellenistic world, and later of the Roman world, became the repository of copies of accepted classics, possibly works of authors long since dead and of great or minor reputation. No evidence remains of any practiced compensating authors for their speeches or works transcribed in manuscripts. On the one hand, it was certainly difficult to reward financially authors who were long since dead. Also, there is no evidence of any rights being passed *post-mortem* to heirs in order to allow them to claim any sort of financial compensation. On the other hand, plagiarists of major writers, as it has been argued, would have most certainly been detected by the literate society of the time. Furthermore, the case of minor and possibly unknown writers is difficult to assess.

Nonetheless, evidence involving many aspects of intellectual property can to be found in Roman writings. Again, the Roman concept of literary property, like the

Greek one, evolved from a certain social, political, and technical environment. What is quite certain is that building from the knowledge accumulated by the Greeks and the Carthaginians, the Romans were able to evolve the simplest of all written alphabets. Used at first for archives and for funerary or other inscriptions, it became under Greek influence the primary vehicle for Roman literature. Many other civilisations, like the Gauls or the Scandinavians, had various forms of primitive script. For instance, the Etruscans had a fairly advanced system, used for accounting and for arcane religious rituals.[18] None, however, produced any written literature until they adopted Roman script, which they used to write down legends previously transmitted orally. By then Roman writing had become universal in the Mediterranean world. Added to that, by entering Asia in support of the King of Pergamus, the Romans discovered a new support which came to replace papyrus and tablets: the *pergamon* or parchment.[19] History may provide many other instances in explaining the development of Roman literature; nonetheless, the association of Hellenistic influence and culture, and new means of expression gave a new impetus to the dissemination of ideas and therefore to creativity. Undoubtedly this must have had a profound impact on Roman society.

Nonetheless, there is no trace of legislative texts establishing the protection of literary property. This lack of legislative texts leads to the common belief that Romans had no comprehensive ideas of literary ownership. On the contrary, texts and examples pertaining to certain property and personal rights exist beneath the cloak of

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[18] Larissa Bonfante, *Etruscan* (London, 1990), at 15; Mireck B. Polisensky, *The Language and Origins of the Etruscans* (Prague Transal, 1991), at 147.

[19] Skins were used for writing and were known as *charta pergamena*, see Ester V. Hansen, *The Attalids of Pergamon* (Cornell University Press, 1971), at 214-15.

a different social context. The study of Roman writers suggests that authors drew some profits from their manuscripts and also they were respected as such. Cicero lets us presume that agreements on the publication of his works were concluded between himself and his publisher, Atticus. He wrote,

> "You have excellently sold my speech for Ligarius. In the future, I shall entrust you with publishing whatever I shall write".[20]

Clearly, Cicero derived some financial interests from the sale of his works. Moreover, it could be argued that the nature of Cicero's interest was not only financial but also moral. In Latin, the verb *vendere* suggests not only to sell but also to praise or to recommend. Atticus had certainly sold Cicero's work at an excellent price and possibly, as a good salesman, highly praised the work and its author. In another letter to Atticus, Cicero chose the verb *commendare* and not *vendere*. This could suggest that his work *Pro Ligario* had received such a good recommendation that Balbus sent it to Caesar himself.[21] In doing so, Balbus had certainly a great esteem for the work and its author in order to send a copy to the consul; but also Caesar himself regarded Cicero's endeavours with interest. From all this, it follows that competing claims must have existed between authors and *bibliopolas* (book-sellers). For instance, Seneca in *De Beneficius* reports on Cicero's relationship with Dorus his bookseller:

> "We say that the books belong to Cicero. Dorus, the bookseller, claims to own the same books, and the truth is on both sides. The one claims them as their author, the other as the buyer. It is fair to say that they belong to both. Indeed, they belong to both, but not the same way".[22]

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[20] "ligarianam praeciare vendidisti. posthac quidquid scripsero tibi praeconium deferam", Cicero, *Ad Atticus*, Book XIII, 12.2, Aprinum 23 June BC 45.

[21] "ligariam ut video praeclare autoritas tu commendavit", Cicero, *Ad Atticus*, Book XIII, 9.2.

[22] Seneca, *De Beneficius*, Book VI, 6 : "Libros dicimus esse Ciceronis; eosdem Dorus librarius suos uocat, et utrumque verum est : alter illos tamquam auctor sibi. Alter tanquam emptor adserit; ac recte utriusque enim sunt, sed non eodem modo"

Both Cicero and Dorus claim concurrent rights on the work but in a consistent manner. Cicero created the work which entitles him to declare this work his own and the right of Dorus is based on his capacity as *emptor*-buyer. Possibly, a contract had been created between Cicero and Dorus where Dorus acquired certain rights, by sale, to Cicero's work. In other words, private arrangements made Cicero's works the property of Dorus. Nonetheless, Cicero as their author was keeping certain rights over their use. The problem is now to explain the nature of such concurrent rights and how they were enforced.

Precise evidence in the Roman literature describes the relationship which existed between writers and publishers. Not only does Suetonius in *De Illustribus Grammaticiis* give us proof that authors recovered financial benefits from their works but he also mentions the amount of sixteen thousand sesterces which were paid to the "poor" Pompilius Andronicus.[23] Further, Pliny the Younger says that his uncle, Pliny the Elder:

> "used himself to tell us that when he was comptroller of the revenue in Spain, he could have sold these manuscripts to Larcius Licinius for four thousand sesterces and then there were not many of them".[24]

Clearly, great writers gained substantial financial benefits from their works. This brings us to the question whether all authors could or wanted to benefit from their works. Martial set the tone quite clearly: "Reader, pay up! You pretend you can't

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[23] "Verum adeo imops atque egens, ut coactus sit praecipuum illud opusculum suum annallum Ennii elenchorum sedecim milibus cuidam vendere" (Andronicus "was so poor and needy that he was forced to sell that admirable little work of his *Criticism of the Annals of Ennius* to someone or other for sixteen thousand sesterces"), Suetonius, *De Illustribus Grammaticiis*, Book VIII.

[24] "Referebat ipse potuisse se, cum procureret in Hispania, vendere hos commentarios Larcio Licino quadegintis milibus nummum; et tunc aliquato panciore erant", Plini Caecili Secondi, *Epistularum*, Liber III, 5.

hear? Good-bye then".[25] Nonetheless, opponents of a certain notion of pecuniary reward may uphold the view of Horace, who, it would seem, did not want to sell his works.[26] In general the poor situation of authors can be explained by the conception of the dignity of intellectual labour and the prevailing acceptance of patronage.[27] Suetonius, speaking about Pompilius Andronicus, sensibly points out that he:

> "was so poor and needy that he was forced to sell that admirable little work of his *Criticism of the Annales of Ennius* to someone or other for sixteen thousand sesterces".

The point is not that all authors made their fortune from their work nor even that they enabled them to live, but to establish that there existed a pecuniary right, whatever was its commercial value. Incidentally, one must not forget that Pliny the Younger "could have sold" his manuscripts.

The question remains as to the object of such private agreements between writers and publishers. Was it only the manuscript which was sold as a material object? Or did the buyer get something else, such as the right to copy and to reproduce the text? The obvious purpose for the *bibliopolin* was to draw a benefit from the manuscript by turning out copies of it and circulating them among the public. The original owner certainly knew this purpose, and consequently the parties intended the contract to cover not only the material ownership of the manuscript but also the right to publish and reproduce it. Furthermore, books were far from cheap: five *dinarii* for Martial's Epigrams according to the author's testimony.[28] It would be a mistake to

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[25] "sed Luprus usuram , puerique diaria poscunt, lector, solve : taces, dissimulasque? Vale!", Martial, *Epigrams*, Book XI, 108.

[26] Horace, *Satires*, I, vi:71.

[27] [Auerbach, 1965], at 242.

[28] "He will give you, from the first a second shelf, a Martial, well smoothed with pumice-stone, and adorne with purple, for five dinarii", Martial, *Epigrams*, I:117.

think that an author did not seek his own share of such profits by selling his manuscripts.[29] Furthermore, according to Symmachus, at the end of the Roman imperial period, "when your song has gone out once you have given up all rights; a published work is free".[30]

Nonetheless, distinction between moral rights on manuscript and the exclusive right of reproduction cannot be found in Roman legal theory. The economic rights of an author resided solely in possession of the manuscript: *solo cedit superficies*.[31] Unlike Greece, the emperor Zeno codified in 480 AD strict provisions as who could secure monopolies. According to the code "no one shall exercise a monopoly over any [...] material whatever by his own authority or under that of an imperial rescript heretofore or hereafter promulgated [...]".[32] As a result, only state monopolies, trade monopolies in certain trades, exclusive rights of property owners to their real estate or chattels, and negotiated or contractual monopolies of individuals and companies trading with cities were allowed. These provisions conform to the practice described as regards manuscript ownership, and to the rule *solo cedit superficies*. Publication certainly terminated all property rights of the authors. However, it cannot be said that Romans did not perceive proprietary and personal rights as a whole; they simply did not dissociate them. As soon as the first copies produced by the *bibliopolas* were in the hands of the public, anyone could make copies of them. Therefore, the right to reproduce was in a way a consequence of owning the manuscript. Once the manuscript was bought the ownership was transferred from the seller to the buyer.

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[29] [Auerbach, 1965], at 243.
[30] cited in [Prager, 1952], at 116.
[31] "... the building goes with the ground", (Digest) [Auerbach, 1965], at 242.
[32] Justinian Code, IV, 59

The author lost all rights in the manuscript. Nevertheless, the right to control the use of the work was kept by the author. Moreover, Roman law regarded monopolies as harmful to society because they were inequitable.

As such, Roman authors were aware that publication and exploitation of a work involved economic and moral interests. The author was entitled to decide whether to divulge his work or not, and plagiarists were exposed to public opinion. Several literary texts allude to publication rights. Among them, Seneca exposes clearly the case in *De Beneficius* between Cicero and Baldus.[33] Cicero wrote to Atticus:

> "Tell me, is it proper for you to publish without my order? Even Hermodorus did not do it, he who used to divulge Plato's books".[34]

The author complains about the publication without his authorisation of some of his works. He refers to the unscrupulous Hermodorus. Also, Pliny the Younger wrote to Septitius:

> "You have frequently pressed me to make a select collection of my letters (if there really be any deserving of a special reference) and give them to the public. I have selected them accordingly; not indeed, in their proper order of time, for I was not compiling a history, but just as each came to hand. And now I have only to wish that you may have no reason to repent of your advice, nor of my compliance: in that case, I may probably enquire after the rest which at present lie neglected, and preserve those I shall hereafter write. Farewell".[35]

It is clear that Septitius urged Pliny to publish his letters because their publication was subject first to his authorisation. In another letter, Pliny sent a book and asked

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[33] "Libros dicimus esse Ciceronis; eosdem Dorus librarius suos uocat, et utrumque verum est : alter illos tamquam auctor sibi. Alter tanquam emptor adserit; ac recte utriusque enim sunt, sed non eodem modo", Seneca, *De Beneficius*, Book VI, 6.

[34] Cicero, *Ad Atticus*, Book VIII, 21

[35] "Frequenter hortatus es ut epistulas si quas paulo curatius scripsissem, colligerem publicarem que. Collegi non seruato temporis ordine (necuque enim historian componebam), sed utquaeque in manus uenerat. Seperedt ut nes te consili nec me paeniteat obsequii. Ita eniumfiet, ut eas quae adhuc neglectae iacent requiram et si quas addidero non supprimam. Vale", Pliny the Younger, *Epist I*, Book 1.

Arrianus to make the necessary corrections.[36] Thereafter, he would hand the manuscript to a *bibliopola* with instructions to publish it. The author appears to have an absolute control over his work before publication. On another occasion Pliny asked Pompeius Saterninus to be kind enough to revise a speech made in his native town the day he founded a library there, but reserved to himself the right to publish it or not after examination.[37] Plagiarism was also condemned by writers. Horace denounced the lifting of Celsus Albinovamnus and warns writers of the sort to be satisfied with their own material, and thus not to appropriate other people's works, if they do not wish to share the humiliating fate of the jay strutting in borrowed plumes.[38] Martial wrote several epigrams against the plagiarist Fidentinus,[39] and stands virulently against literary piracy:

> "My works need neither witness nor judge. Your page stands against you and tells you: you are a thief".[40]

Plagiarism was a serious risk to an ancient author, as shown by the numerous attacks made by Martial in his epigrams.[41] Editors claimed also that it was not strictly with plagiarism but with a certain degree of imitation or censorship which they suffered.[42] As a result, writers tended to publish their work in a hurry to prevent it being stolen

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[36] Letter to Arrianus, Pliny, *Epist I*, Book 2.

[37] Letter to Pompeius Saterninus, Pliny, *Epist I*, Book 8.

[38] Horace, *Epist* I:3.

[39] "Fama refert nostros te, Fidentine, libellos non aliter populo quam recitare tuos", Martial, *Epig* I:29 and "Quem recitas meus est, O Fidentine, libellus: sed male cum recitas, incipit esse tuus", *Epig* I: 38.

[40] Martial *Epig* I:53.

[41] Martial, *Epig* I:30, 52, 63, 66, 72.

[42] "Some of the Roman emperors exercised a strict censorship over literary property. Augustus on assuming the office of High Priest [...] searched for books of spurious Sibylline prophecies, both Latin and Greek, and committed the whole collection amounting to upwards of two thousand copies; to the flames. Much more brutal outrages both on authors and publishers were perpetrated by Domitian. On one occasion, according to Suetonius, Domitian not only put to death Hermogenes of Tarsus because of certain passages in his history to which the tyrant objected but crucified also the copiers who had issued the work", [Mumby, 1930], at 18.

since unpublished works seemed to have a greater risk of being plagiarised than published ones.[43] As a matter of fact, Roman public libraries contained numerous manuscripts unknown to the public at large which could have been easily copied or plagiarised.[44] Even though such act was condemned by public opinion no specific legislation repressing plagiarism can be found.

During the Renaissance several jurists and scholars, for example Douaren, Thomasius, Reinelius and Salden debated on the subject.[45] They observed that the Fabian law penalised an offence called *plagium* and that Justinian's Digest and Code included some provisions relating to the subject.[46] They noticed also that Martial used in one of his epigrams the term *plagiarius* to designate a thief of verses.[47] The scholars simply concluded that Roman law was repressing plagiarism. A modern author, Jules Mareschal, drew the same conclusion, referring to exactly the same texts. He wrote:

> "Thus plagiarism was not only stigmatised in Rome by the public opinion but punished by law as a theft with it was assimilated".[48]

Although this theory could be sound, it appears that the interpretation of the term *plagium* does not mean literary plagiarism but the disposal by means of selling or otherwise of a free person. In fact, the Fabian law *de plagiariis* punished thieves of children, slaves or free men. One may then assume that Martial compared his books to

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[43] Horace, *Epist* 1:3 and Ausonius *Epist* I :31,25

[44] [Mumby, 1930], at 16.

[45] Charles Nodier, *Question de litérature légale*, 2nd ed. (Paris, 1928), cited in Marie Claude Dock, *Genèse et évolution de la notion de propriété littéraire*, 1 Revue Internationale du Droit d'Auteur 1974, at 153, Hereafter: [Dock, 1974]

[46] *Dig.* XLVIII, 15 and C IX, 20

[47] Martial, *Epig* I, 52

[48] Jules Mareschal, *Mémoires à consulter sur la question juridique de la propriété perpétuelle et héréditaire des oeuvres de l'esprit* (Paris, 1861), at 15, cited in [Dock, 1974], at 153.

his children by way of a metaphor. Indeed, if one considers intellectual creation as the projection of the author's personality, the very fact of plagiarism prejudices the author himself. Other authors believed that there was a sanction of moral rights in the Digest. The *actio injuriarium* would have been granted to the victim of a "glory theft" called *furtum laudis*. In fact these texts concern those who spread slander and in no way usurpers and infringers of works.[49] This shows clearly how Roman texts have been abbreviated and abused in order to find a sanction called plagiarism.

Nonetheless, by way of analogy, although Roman law did not have any remedy on infringement, the right could have existed *in abstracto* on tangible forms of expression. Although moral rights of the author were well asserted, economic rights were simply interpreted as the sale of a commodity like any other chattel. More importantly, the Justinianic Code defines an action, called *actio servi corrupti*, which served as the remedy of a slave owner against the person who enticed his slave to steal some proprietary information and surrender it to a competitor in exchange for money.[50] What we are to deduce from this is that the owner of information had some legal means at his disposal in order to protect personal rights over his manuscript such as right of first publication or respect for their work. As regards to the *actio servi corrupti*, such legal means were intended, I venture to say, most certainly to include the protection of secret information against unauthorised publication.

It may be concluded that the legal protection of authors in Antiquity, and especially in Roman time, was well asserted. I would therefore agree with Eugène

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[49] Olignier, *Le droit d'auteur*, Vol, 2, Tome 1, (Paris, 1943), at 19 & 20.

[50] Mladen Vukmir, *The Roots of Anglo-American Intellectual Property Law in Roman Law*, 32 Idea - The Journal of Law and Technology 1992, at 134.

Pouillet that "copyright has always existed, but it did not enter from the very start into legislation". However, I would dissent on his affirmation that no legislation was available to owners of manuscripts, whether authors or other proprietors, and to authors in respect to their personal rights.[51]

In order to put some perspective upon authors' access to these rights, I would like to examine the Greek and Roman social context in which creativity was expressed. Moreover, the attitude of the patron and the artist or writer towards each other and towards society needs some thoughtful appreciation. As opposed to Greece, patronage was widely discussed in Roman literature. The problem that one faces in Roman literature is that the Latin terms *patronus* and *cliens* do not have their equivalent in ancient Greek.[52] For my part, the possible non existence of patronage in classical Greece was due to the political structure of Greek communities. Indeed, as Andrew Wallace-Hadrill observes:

> "In classical Athens, this was successfully reduced to a minimum; in Rome, from its origins to late antiquity, most of the contributors see it playing a strategic role on maintaining the social order"[53]

For the Greek, *lógos* enabled citizens to perform, reasoned therefore to maintain their social order.[54] The exhaustive and exclusive aspect of Greek communities could not sustain patronage as it existed in Roman time. Indeed, patronage represented a voluntary but not legally enforceable relationship. In other words, patrons and clients were mostly fellow citizens and equal in theory before the law.[55] Moreover, patronage

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[51] [Pouillet, 1908], at 2.

[52] Andrew Wallace-Hadrill (ed.), *Patronage in Ancient Society*, (London, 1990), at 3, Hereafter: [Wallace-Hadrill, 1990]

[53] [Wallace-Hadrill, 1990], at 8.

[54] Lógos represent the city or community in which Greek citizens evolve in terms of political economic and social order.

[55] *ibid*, at 8.

not only created personal ties between individuals but also formed a social system. It represented a particular structure of human inequality which was not compatible with the Greek notion of citizenship. In Roman time, patronage was a form of using public resources to obtain private gains, especially in politics. Such a relationship would have been objected to by any Greek citizen. These characteristics deserve special consideration in the light of literary and artistic property. One important consideration is to dissociate patronage of literature and patronage of art. For instance, writers seemed to possess enough freedom to express their creativity. Artists, unlike writers, rarely had freedom in choosing their themes, styles and materials.[56] For instance, in Greece sculptors were simply considered as manual labourers. Products of the intellect permitted their creators to have more freedom in the manner in which they were produced. Nonetheless, the personality of the patron and the authors blended to form a third person and makes it difficult to dissociate each contribution. In general, both artists and writers had restricted creative freedom.

We have so far concerned ourselves only with the literary merit of such contributions but patronage was also a social system which aimed at influencing society in its social, economic and political aspects. Writers and artists were needed by society, and especially by patrons, to manipulate the perception of reality by the general public.[57] Patronage in ancient society was a means of control of the masses. Artists and writers had to be useful to their patrons and not simply good in their

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[56] Barbara K. Gold (ed.), *Literary and Artistic Patronage in Ancient Rome*, (University of Texas Press, 1982), at xiv, Hereafter: [Gold, 1982]

[57] *ibid*, at 72.

creative skills. This position is put with commendable clarity, by Andrew Wallace-Hadrill. He observes:

> "Dionysius of Halicarnassus saw in the patronage instituted by Romulus an instrument of social control, that kept the population in subjection to the ruling class. [...] The secret of the game was the manipulation of scarce resources"[58]

Information, as a scarce resource, was most certainly a prime subject for manipulation. Therefore, intellectual property in those times could have represented a political and social compromise reflecting the position and role of artists and writers in society, quite different from our modern copyright system, as a function. Moreover, patronage was not a well-defined relationship with a predictable set of services exchanged. It must have been rather ill-defined and unpredictable and writers had most to say about literary patronage and its influence on their creativity.

Consequently, social environment played a vital role on creativity. Patronage was also closely related to the medieval perception of the value of creators and authors in society. As a matter of fact:

> "Patronage, slavery and citizenship form a tight nexus in classical culture, and the fate of all three may be seen as closely linked as the Christian culture of the middle ages supervenes."[59]

Two important questions emerge. First, whether or not patronage and clientage existed as a strategic mechanism of resource allocation which affected creativity. And second, whether or not the system played a dominant role in the organisation of economy, polity and society.

### MEDIEVAL NON-MONOPOLISTIC PRIVILEGES

[58] [Wallace-Hadrill, 1990], at 72-73.
[59] *ibid*, at 8.

During the centuries which followed the fall of the Western Roman empire, barbarian invasions drove the lay world away from intellectual speculations. In early medieval society social and political conditions did not favour any development of the useful arts. As Frank Prager observed,

> "Political thinking had been impoverished by the physical destruction of brute force, by dogmatism, intolerance and intimidation."[60]

Nonetheless, letters sought refuge and protection in the meditative silence of monastic schools maintaining classical learning in its most elementary aspect. Therefore, the task of early monastic scribes consisted in the re-production and preservation of classic literature partially destroyed from years of turbulence. Skilful monks devoted their time in the copying and transcription of Greek and Latin texts as well as the holy scriptures. Soon in addition to their labour as transcribers, some learned monks, such as Cassiodorus (c.480-575) influenced the Church in bringing a large measure of scholarship and zeal for literary and educational interests.[61] Comments on the scriptures and the classics started being added. Saint Gregory the Great (c.540-604), elected Pope in 590, exercised an important influence over intellectual interests. He clearly defended his position as :

> "The devils know well that the knowledge of profane literature helps us to understand sacred literature. In dissuading us from this study, they act as the Philistines did when they interdicted the Israelites from making swords and lances, and obliged that nation to come to them for the sharpening of their axes and ploughshares."[62]

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[60] [Prager, 1952], at 117.

[61] Among the most important early monkish scribes: St. Honoratus, Bishop of Arles, St. Jerome in Bethlehem, St. Augustine in Hippo, Isidore, Bishop of Seville, see G.H. Putnam, *Books and Their Makers*, Vol. 1 (1896), at 30-36, Hereafter: [Putnam, 1896 (a)]

[62] Liv. v. *Primum Regum*, ch.xxx., Sec.30, cited in G.H. Putnam, *Books and Their Makers*, Vol. 1 (1896), at 34.

In the sixth century, Ireland, safe from unremitting barbarian invasions, became a sanctuary for scholars of medieval Europe. Not only did monasteries act as repositories of classical culture they also became major centres for book production.[63] Certain religious orders charged themselves with literary responsibilities. Saint Benedict of Nursia (c.480-c.543), for instance, did not limit monastic life to simple spiritual labour but to external, manual and literary labour which had the effect of preserving classical teachings and scholarship. His teaching was that:

> "Idleness is the enemy of the soul: hence brethren ought at certain seasons to occupy themselves with manual labour, and again at certain hours with holy reading. [...] During Lent, let them apply themselves to reading from morning until the end of the third hour, and in these days of Lent, let them receive a book apiece from the library and read it straight through. These books are to be given out at the beginning of Lent."[64]

Such a regulation gave a decisive impulse to scholarship and secured the continuity of intellectual life through the Dark Ages. As distribution centres for classical and religious literature, monasteries became so well organised that some of them became unique reference sources with enlarged libraries. Such repositories rendered possible the production of copies of books for exchange with other monasteries. Surely the lesson to be learned from all this intellectual activity is that concern with regard to the protection of literary endeavours must have existed.

A well-known case of infringement of the right to copy is reported in early medieval Irish literature.[65] A young Irish missionary, Saint Columba (521-97), became associated with scholarship and intellectual influences in Northern Europe. He

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[63] [Mumby, 1930], at 30.

[64] [Putnam, 1896 (a)], at 28.

[65] Adomnàn, *Vita Sanct? Columbae, Founder of Hy*, by William Reeves (Dublin, 1857); Jeremy Philips, *St Columba the Copyright Infringer*, 12 European Intellectual Property Review 1985, at 350-353, Hereafter: [Philips, 1985]

undertook a program of copying and disseminating manuscripts transmitting the *senchas*, Celtic traditions, and the *filids*, druidic institutions, and founded many famous scholastic establishments known for their production of manuscripts. Always in search of rare manuscripts he decided to make a clandestine copy of a Psalter, knowing that the request to be allowed to borrow or copy it would have been rejected. Finnian, Abbot of the monastery which owned the Psalter, claimed the copy on the ground that a copy made without permission ought to belong to the owner of the original manuscript. In support of his claim, the Abbot argued that the transcript was the offspring of the original manuscript. The case was brought to the attention of king Diarmaid mac Cerbaill since St. Columba refused to bring back the copy. The king of Tara decided against St. Columba on the analogy that:

> "To every cow belongeth her calf, to every book its little book"[66]

In order to give a complete report of the case, the legend says that Columba refused to comply with the ruling precipitating the country in to civil war which deposed Diarmaid mac Cerbaill using a kind of national military and religious palladium known as the *cathach*, the fighter.[67] The case illustrates and represents the impression in the mind of Adomnàn, writing not half a century after the death of the saint in 597 A.D., concerning property in manuscripts. Whether the case is entirely true or not, important considerations may be derived from it which I will try to analyse in the light of medieval life.

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[66] "Le gach boin a boinin, le gach leabhar a leabhrum", see [Philips, 1985], at 352.

[67] Adomnàn, Book II; As a matter of fact, a book still survives in Dublin and is translated as "The Battler" which is said to be the cathach.

In becoming large production centres of manuscripts and storing them in libraries with the intent of exchanging or selling copies, monasteries had to derive certain benefits. According to the rule of Saint Benedict:

> "...it was considered holy and proper work for monks to copy and transcribe "good" books, and it was not unusual for the copier to try to protect it from theft and destruction."[68]

Therefore, manuscripts represented a considerable value as a whole and not only for their material value.[69] Material production of manuscripts required not only considerable expenditure of skilled labour and precious materials but also embodied time-consuming research in many libraries, knowledge, and intellectual skills. The development of exchanges between monasteries gave growing importance to the unique literary and aesthetic importance of manuscripts.[70] As a result accumulation of property and wealth in the form of literary endeavours spread among monasteries. This wealth rested upon ownership of parchments and manuscripts upon which various texts had been placed. In that respect, monasteries strictly monitored rights to copy texts and aesthetic forms of expression, and in this manner controlled the use of the texts transcribed. Rights to copy and for collation of information were traduced by reciprocal exchange of valuable manuscripts or sale of duplicated manuscripts.

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[68] H.C. Streibich, *The Moral Right of Ownership to Intellectual Property, Part1- From the beginning to the Age of Printing*, 6 Memphis St. U. Rev. 1975, at 1, cited in Jeff Berg, *Moral Rights: A Legal, Historical and Anthropological Reappraisal*, 6 Intellectual Property Journal 1991, at 358, Hereafter: [Berg, 1991]

[69] M. T. Clanchy, *From Memory to Written Record, England 1066-1307* (London, 1979), at 93, Hereafter: [Clanchy, 1979]

[70] The Dominicans acted as scholars and required extended libraries to freely argue. The were opposed in their perception to the old Benedictine tradition on the purpose of the use of manuscripts. The Benedictine were expected to ruminate on a text which had been designated to them as a sacred task, where illuminated images produced a state of mystical contemplation and understanding, see [Clanchy, 1979], at 130.

Ownership of manuscripts sprang from the very essence of the texts transcribed. Each text bore the doctrine of each individual religious order, in other words their own interpretation of the holy scriptures. In practice, manuscripts of the same scriptures from different orders could not be in exact accord. In order to control the use of the text, or of their doctrine, religious communities needed to exercise material control on manuscripts. Holy men were concerned with the exactness of and respect for their work, and were therefore concerned with some prerogatives of what we might call today moral rights.[71] Complaints to the Church and state authority were decided against St. Columba on the analogy that the original gave birth to its transcripts. In strictly controlling access and the right to copy their manuscripts, monks kept a firm control on reproductions, ensuring respect of the doctrine. By the end of the twelfth century some writers among the lay community observed the same attitude:

> "implying both an awareness of the specificity of the creation and recognition of the individual contribution".[72]

Nonetheless, one must insist that respect toward individual contributions did not appear until the early Renaissance. The clerical character of the author and the ecclesiastical nature of his compensation still constituted the principal distinction between the beginning of compensation for literary labour in the early Renaissance and the arrangements under which poets or chroniclers were rewarded or respected.

In early medieval times, only clerics devoted time to literary creation and they developed a communal conception of literary property. The technique of committing

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[71] [Dock, 1974], at 154.
[72] *ibid*, at 159.

words to writing clearly distinguished authors from duplicators.[73] Dictating was the usual form of literary composition and the *ars dictaminis* were taught in monastic schools as part of rhetoric and the skill governing it. The use of writing, *scriptitare*, was confined to the making of a fair copy on parchment and has to be distinguished from composition as a separate art. The role of the composer, *dictator*, is therefore distinct from the work of the scribe, *scriptor*, who is a specialist in the art of calligraphy. Scribes learned and practised their skills at the *scriptorium.*[74] Moreover, another distinction has to be made between scribes and mere copyists, who only duplicate manuscripts. This technique of composition and writing books comes from ecclesiastical schools, and especially the *scriptorum*, under the influence of classical rhetoric.

These important distinctions demonstrate how specific and interdependent was the role of each member of the community in the production of manuscripts. As centres of religious meditation, intellectual development and communal work, religious orders established rules based upon the concept of division of work. Monks specialised in the dictation, writing, copying, illumination, or binding of manuscripts. At first, manuscripts were done slowly, and probably with a different degree of rapidity on the part of different specialised monks. It was probably arranged to divide up the sheets to be copied among a number of scribes. There is evidence of this arrangement in a certain number of manuscripts where the different portions put together under one cover are evidently the work of different hands.[75] The transcribed

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[73] [Clanchy, 1979], at 97.
[74] [Putnam, 1896 (a)], at 76.
[75] *ibid*, at 65.

texts reflected the doctrine of the community to which they belonged so the making of these manuscripts was made possible by the co-operation of all its members. The final work was not the result of one *dictator* but the result of a collective effort quite indivisible.[76] I would certainly agree that such a common effort represented a collective work of authorship.[77] Ownership could not be attributed to a single man, but to a group of men, since all the community participated in a way or an other to the final product. Therefore, the final product could be recognised as a collective work of authorship in the sense of our modern copyright language. What is difficult to determine is to what extent the role of self-expression was inserted in the classical or religious texts within the dictation process. Questions of plagiarism apparently were not of concern; however, the respect of the doctrine entrusted to the text was. As regards the duplication process, minimal original literary creation had been involved, whereas remarkable technical skills were demonstrated by the copyists.

Moreover, the teachings of Plato and Aristotle prevailed in this respect. Scribal culture could not possibly conceptualise and attribute literary ownership or rewards to a single author.[78] Medieval European society was composed of many communities where anonymity of individuals was the norm to the benefit of the group and refuting personal responsibility. Control over holy scriptures and classical literature was accorded such an extraordinary public significance that individual or personal concerns, for instance those of *dictators,* were submerged by community ones.[79] As a

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[76] [Mumby, 1930], at 30.

[77] [Dock, 1974], at 157.

[78] Elizabeth L. Eisenstein, *The Printing Press as an Agent of Change: Communications and Cultural Transformations in Early-Modern Europe*, (Cambridge University Press, 1979), at 229.

[79] [Berg, 1991] at 358.

matter of fact, very few manuscripts bear the name of their author. The anonymity of most medieval work is also explained by the modesty and egalitarian principles ruling all ecclesiastical relationships, but more importantly by the very purpose of religious orders. It would not have been difficult to identify one author for a particular book since in practice:

> "when a man took his vows, he abandoned the name by which he had been known in the secular world, and he took a name of one of the monastic brothers who had recently died. As a result, every Franciscan house would always have its Bonaventura, but the identity of 'Bonaventura' at any time could be defined only by considerable research."[80]

The purpose of the religious orders was also to proselytise their faith and to transmit to posterity their knowledge, not to claim authorship of their work.[81] In certain ways the texts were meant to belong to the Christian world and be for its future intellectual development. From Normandy in 1170 Geoffrey sub-prior of St. Barbe wrote to Brother Peter Mangot in such terms:

> "A monastery without a library is like a castle without an armory. Our library is our armory. Thence it is that we bring forth the sentences of the divine Law like sharp arrows to attack the enemy. Thence we take the armour of righteousness, the helmet of salvation, the shield of faith, and the sword of the spirit, which is the Word of God".[82]

Duplicating or writing books was a secure means to spread Christian faith and to influence public opinion.[83] Indeed, what was written was carefully chosen in order to pass down to future generations what monks thought to be the truest or the best. It has been also argued that preoccupation with posterity even led to forgery or alteration of

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[80] D. Doorstin, *The Discoverers: A History of Man's Search to Know His World and Himself* (1985), at 530, cited in Tom G. Palmer, *Intellectual Property: A Non-Posnerian Law and Economics Approach*, 12 Hamline Law Review 1989, at 272.

[81] [Clanchy, 1979], at 117.

[82] S.R. Maitland, *The Dark Ages, A series of Essays Intended to Illustrate the State of Religion and Literature in the Ninth, Tenth, Eleventh, and Twelfth Centuries*, London (1845), at 200.

[83] [Clanchy, 1979], at 118; [Putnam, 1896 (a)], at 82.

documents.[84] This all demonstrates that the purpose of the monastic orders was to inform, or misinform, the public at large.

Religious communities not only derived important prestige but also sizeable financial benefits from their work by exchanging and selling duplications to other religious orders or secular authorities. Books were available for copying as they were available for reference. Until the fifteenth century writing was a religious duty and an exclusively ecclesiastical business. They enjoyed a privileged position in the production of manuscripts because production centres carefully controlled the literary wealth in their possession and because clerics formed the principal educated fringe of the medieval population. The clerics by administering their ecclesiastical communities or large properties also rendered the service of administering the lay world, until learned laymen became able to do so. This service ranged from the daily administration of private estates to the administration of the state. More fundamentally, it is important to realise that throughout the Middle Ages Emperor Zeno's law condemning monopolies was still in effect.

> "While traditional monopolies, such as those of the guilds, were well recognised, attempted monopoly grants to individuals were clearly illegal and were likely to be invalidated by the Courts."[85]

Therefore, the attribution of individual monopolies to authors would have been certainly denied. The concept of individual literary property based upon monopolistic appropriation and distribution of works was then impeded. Monasteries benefited from non-monopolistic privileges in the production of manuscripts. In controlling access to their manuscripts as pieces of literature or learning, they derived financial

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[84] [Clanchy, 1979], at 119.
[85] [Prager, 1952], at 122.

gains which could be secured for the monastery *scriptorium* by conceding for pay the privilege of making one or more copies of the manuscript. In other words, the privilege took the form of a prohibition to the effect of a property right involving a source of income. Enforcement and control of the attribution and integrity of manuscripts did not need the grant of a monopoly. According to St. Benedict:

> "A common practice was for the transcriber to add to the close of the manuscript an anathema against any person who would steal of destroy it."[86]

Threats of supernatural intervention or of religious nature such as penalties of excommunication were not uncommon.[87] For instance, King John borrowed "the book called Pliny" only under the solemn pledge to return it. The custom of securing books by chains prevailed in certain libraries in the most religious institutions.[88] In the same manner rabbinical authority controlled attribution and the integrity of Jewish scholarship through the middle ages.[89] However, it can be said that copying manuscripts was a far greater privilege than simply consulting them. One could assume that threats of excommunication or the mystic powers entrusted in manuscripts may have been sufficient enough to protect them from being stolen. Nonetheless, the help of temporal and secular powers seems to have been thought necessary in the case of St. Columba.

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[86] H.C. Streibich, *The Moral Right of Ownership to Intellectual Property, Part1- From the beginning to the Age of Printing*, 6 Memphis St. U. Rev. 1975, at 1, cited in [Berg, 1991] at 358.

[87] [Mumby, 1930], at 32.

[88] Dominicans used to chain indexes for reference in a separate room from the library where books could be consulted or borrowed under certain rules, see [Clanchy, 1979], at 130; Eusebius mentions that the Roman Senate in the time of Claudius ordered the treatise of Philo Judaeus on the impiety of Caligula to be chained in the library as a famous monument. There appears to have been an early appreciation on the part of certain of the monastery scholars of the importance of indexes, see [Putnam, 1896 (a)], at 141.

[89] *ibid*

In the twelfth century an intellectual renaissance occurred among when more peaceful times spread over medieval Europe. The development of ecclesiastical education within court circles provided literate laymen for the general administration of the state, who used the principle of dictating to scribes to run estates or public affairs.[90] The material of the twelfth-century writer who composed for himself or wrote from dictation was not the parchment used by the copyist, but wax tablets on which he put down notes or drafts. An increasing number of documents proliferated throughout Europe as the bureaucracy expanded.[91] Generally, works produced in the lay community were mainly administrative documents such as deeds, wills or charters. Therefore, no sense of literary ownership was perceived to be necessary because no contribution was brought to society beside the administrative paper work. Nevertheless, authors of lay literature began composing as well.[92] This early lay literature was represented by minstrels or troubadours in courts, whose poems, plays, and novels were presented at public recitations or dramatic performances.[93] Soon, the growing number of students and the quest for greater independence from the bishops and the lay authorities and the corporate spirit which was developing everywhere in the twelfth and thirteenth centuries all encouraged the establishment of universities. Ecclesiastical schools, such as the Cluniacs or Cistercians, lost interest in scholarly endeavours and declined. Universities were corporations of a new kind, bringing

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[90] The medieval axiom that laymen were illiterate and that clergy were literate reflects the early development of literature movement, see [Clanchy, 1979], at 177.

[91] Graphs showing the increase in use of the sealing wax used by the English Chancery and the multiplication in number of letters extant per year of reign in the Vatican, England, and France between 1060 and 1200, see [Clanchy, 1979], at 45.

[92] [Auerbach, 1965], at 283 & 290-338; Edmond Faral, *Les Jongleurs en France au Moyen Age*, (Paris, 1987)

[93] Vernacular romances are thought to have been first recorded in writings, see [Auerbach, 1965], at 288.

together the totality, *universitas*, of the masters and pupils. At a time when workers and craftsmen, following the example of the municipalities, were united in guilds to defend their interests, masters and scholars were doing virtually the same. They maintained a link between education and civic life, gradually extending public interest in promotion of the useful arts. There was an attempt to learn from others, which gave rise to institutional and social changes foreshadowing the concept of literary property. Major universities received students from all over Europe, and, thanks to the Papacy, scholars could teach anywhere according to the *licentia ubique docendi*. In the thirteenth century, universities were truly European institutions, but became more and more national in the fourteenth and fifteenth centuries. Papal protection gave them the exclusive right to confer degrees which were practically the same throughout Europe: the baccalaureate, the licence *licentia docendi*, and the *doctorate*. More strikingly, universities enjoyed financial aid and fiscal non-exclusive privileges in order to encourage the development of intellectual endeavour and yet be perfectly legal under Zeno's law.[94]

It must be realised that these new attitudes evolved in spite of all legal and philosophical difficulties as argued by Plato and Aristotle. With the beginning of the thirteenth century, the responsibility for intellectual life in Europe was transferred from the ecclesiastical schools to the early organised universities. As a result, an immediate intellectual renaissance developed among laymen. This change meant, among other things, that the control and direction of education, and also the production of literary works, no longer rested solely with the ecclesiastics.

[94] [Prager, 1952], at 119.

Consequently, a new body of scholars and lay writers appeared outside the restricted circle of the clerics, so that the Church was not any more the only source or interpreter of knowledge. Early literary undertakings concerned mainly scholarly matters within the university *curriculum*. An important transition occurred, from the simple duplication or translation of classics to the creation of pure original literary works. Personal responsibility had to be assumed, and therefore one step was made in the direction of recognising intellectual property attached to one person. Nonetheless, as modern literary property developed, restrictions on its development evolved as well. For instance, four great divisions or faculties formed in the early universities: Theology, Philosophy (or Art), Law and Medicine.[95] Obviously, the first faculty remained under the close supervision of the Church as Rome contested heretical doctrines by interfering with certain teaching, intending to keep control on the knowledge taught in lecture-rooms which exercised a direct influence on other faculties, such as Faculty of Art.

Soon university towns became interested in the production, hiring, and selling of manuscripts. The early trade in manuscripts was carried out without any supervision or restriction on the part of universities or any other authority. The only control on book production was exercised by *stationarii* in connection with educational materials required by the *curriculum*, therefore on practical matters.[96] They were entrusted with the special responsibility of keeping in stock a sufficient number of transcripts or copies of books ordered or recommended in courses of universities in order to rent them to students and instructors. A general supervision of

[95] [Putnam, 1896 (a)], at 179.
[96] They first appeared at the university of Bologna in 1239, see [Auerbach, 1965], at 289.

the recommended texts for their correctness and completeness had already been regulated in most universities. Official *stationarii* were appointed, or re-appointed every year when their work was proving to be satisfactory in implementing universities' code of practice. With the increase in the number of students, the practice of buying manuscripts instesd of hiring them became common.[97] As a result transfer of material ownership of books from *stationarii* to individuals initiated a new trade in book production. Between the years 1250 and 1350 certain obligations were imposed on *stationarii* or *librarii* as they started being qualified. Most importantly, they had to offer for sale or hire no manuscript that had not been passed upon and "taxed" by the appointed authority, with the aim of controlling the new trade. A just and proper price had to be declared conscientiously and exactly for each book, together with the name of the owner in some conspicuous place in the work itself. No disposition could be made of a consigned book without in the first place informing the owner or his representative of the price to be secured. In the event of a book being brought to Paris by a stranger, he had to give immediate information to the authorities so that, before such work could be copied for hire or sale, it should be approved by the authorities as orthodox and suitable for the use of the members of the university, as well as complete and correct in its own text.[98]

These rules operated as a denial of basic author's rights. Their primary objective was to control literary creations as commodities, and in effect influence the spread of knowledge. Indeed, authors had in effect to content themselves with the

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[97] [Putnam, 1896 (a)], at 189.

[98] Paul Delalain, *Etude sur la librairie parisienne du XIII^e au XV^e* (Paris, 1891), cited in [Putnam, 1896 (a)], at 208.

assurance of securing circulation of their work once they had been accepted by university authorities. It was probably easier for a minstrel to give a public recitation of his own verses, since there were no requirements, than for a scholar to publish his own writings. Furthermore, it has been argued that minstrels or troubadours had a certain awareness of their intellectual creation and of their individual contributions to society.[99] University authorities were still under the influence of the medieval use and utility of manuscripts. Publications from scholars were made within and for the *universitatis* community, as for an ecclesiastical community.[100] No clear distinction could be drawn between scribes and scholarly authors. Also, the communal imperative was probably really strong. The principal concern of university authorities was availability and access of manuscripts to students and scholars, along with the duplication of manuscripts. Consequently, a conceptual dichotomy existed between the dedicated scholars and the entertainers as to the protection of their own endeavours. Added to that, recognition of the skills and labour exercised by scribes emerged to prevail in the forthcoming conceptualisation of intellectual property.

Dealers in printed books started replacing manuscript traders, once the Press imposed itself as the principal means of book-production. Also, the medieval society was composed of professional organisations called guilds. Each town had its own corporations, or craft guilds, characterised by a concern for economic and artisan-manufacture interests and policies. Originally these fraternities offered mutual support

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[99] The religious drama, *Le mystère d'Adam*, explains in detail how words are to be spoken. Actors were instructed not to add or omit anything to speak clearly and to say their lines in the right order, M.D. Legge, *Anglo-Norman Literature and its Background*, 1963, at 319; [Dock, 1974], at 159.

[100] Annie Parent, *Les métiers du livre à Paris au VX^ie siècle* (Genève, 1974), at 14 & 20, Hereafter: [Parent, 1974]

to its members upon payment of their entry.[101] Similarly, early *stationarii* formed their own fraternities and created their own printers' and booksellers' guilds. They aimed to secure continuity of work and income for their members and to maintain a fixed number of small independent producing masters and a satisfactory standard of workmanship. To this end they sought to limit competition and therefore to secure certain privileges. Nonetheless, many steps were to be made before the emergence of copyrights as forms of patent monopolies.

### MEDIEVAL QUASI-PATENTS AND PATENT-MONOPOLIES

The invention of the printing press occurred in Germany in the fifteenth century. This revolutionary form of expression had a determinant impact on society. It changed book production, increasing dissemination of ideas, and with it the legal context. It is not necessary for the purpose of this section to give details of the controversies as to the respective claims of Gutenberg of Mayence, or of Koster of Haarlem, as to the original discovery of the printing-press. Nonetheless, it should be pointed out that the invention of printing is not so much the result of individual invention but the consequence of a long series of experiments and of partial processes.[102] The invention of printing needs to be directly associated with the early introduction of paper making in Europe. Before the introduction of paper, a sheep skin, called *specia*, was folded into sections of four folios and added to others in order to compose a book. The production of paper, fifteen times less expensive than the equivalent surface in

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[101] Antony Black, *Guilds and Civil Society in European Political Thought from the Twelfth Century to the Present*, (London, 1984), at 3.

[102] *Le Livre et L'Imprimerie en Extrême Orient et en Asie du Sud*, Minutes of the conference organised in Paris on 11 March 1983, prepared by J.P. Degre, (Bordeaux, 1986), cited by Guy Betchel, *Gutenberg et l'invention de l'imprimerie, Une Enquète* (Paris, 1992), at 84.

parchment, had long been known to the Chinese, but reached Europe only after the foundation of medieval universities.[103] Added to the mechanisation of the printing press, replacing copying books by hand under dictation, book production increased immediately. The new process made it easier, faster and cheaper to produce multiple copies of books. In terms of efficiency, printing appears to have reduced by about four- fifths the price of works of a scholarly character.[104]

Also, production of books expanded as the public at large became more educated and more interested in public issues, especially during the Reformation. Directly hit, production of books in monasteries had practically ceased by the end of the sixteenth century, since the production of manuscripts could not compete against their printed copies.[105] State authorities, especially the popes of the time, largely influenced by the spirit of the Renaissance, gave a cordial welcome to the revival of scholarly interest. The press was an important means of furthering general education and the intellectual development of communities. In its early development the authorities accepted the printing-press as a useful ally and servant. Publications were not limited to doctrinal works but opened to works of the pagan classics. The clerics themselves co-operated to a certain extent in producing classics for scholarly readers and aimed at distributing cheap books to the public. This position changed later on as the Reformation spread over Europe. As a result, secular and religious authorities brought authors, printers, and publishers under close supervision and censorship.

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[103] [Prager, 1952], at 123.
[104] [Putnam, 1896 (a)], at 375.
[105] *ibi*d, at 370.

The first publishing undertakings appeared in Germany with the invention of the printing press although Venice became the first early Press centre in Europe. In France, the first printers were directly associated with the university of Paris, succeeding to the official *stationarii* of the University. On the contrary, German printers issued books which did not belong to any university curriculum but directly addressed the population's diverse interests. Publications represented considerable expenditures of skilled labour, travel in search of rare manuscripts, and financial means such as lump sums. Printers had to pay for the privilege of examining, collating information about or copying manuscripts held by monasteries. Added to this were substantial investments in the printing-press itself, paper and ink. Nonetheless, early undertakings were made seemingly without help from municipal, state or ecclesiastical non-exclusive privileges. For instance, printing in France began in 1470 and expanded over the ensuing thirty-five years without any author or publisher feeling the need to obtain protection.[106] Also, in 1476 William Caxton introduced printing in England, exporting his press from Bruges to Westminster without seeking any privilege, even though he enjoyed the support of royal patrons.[107] Moreover, German printers and publishers seem to have observed a "moral" code of conduct establishing respect for each others' undertakings irrespective of any privileges or other legal protection given to the works in question.[108] Once printing spread all over

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[106] Elizabeth Armstrong, *Before Coypright. The French Book-Privilege Syste*m, (Cambridge University Press, 1990), at 21, Hereafter: [Armstrong, 1990]

[107] He received the patronage of Edward IV and Henry VII, see Richard Deacon, *A Biography of William Caxton: The first English Editor Printer and Translato*r, (London, 1976), at 103.

[108] Claims on the right to control the publication of books were brought successfully to court without any copyright privilege. Schoffer & Hanquis brought a suit against Bernard Inkus of Frankfort in 1480. In the same year the Magistracy of Frankfort applied to the Magistracy of Lubeck for the protection of Schoffer for illegitimate infringement against Hans Bitz, see [Putnam, 1896 (a)], at 377 & 409.

Europe, production of competing publications made it difficult to recoup the considerable investments or simply to impose observance of codes of conducts. What is quite certain is that by the time printers were facing strong competition, the concept of individual literary property had arisen.

In late medieval Europe, society was ready to conceptualise the idea of industrial and intellectual property establishing the regime of intangible property. In spite of legal and philosophical difficulties, attribution of secondary grants to individuals started being recognised as activities under the legal supervision and direct monopoly of the state. Non-exclusive grants limited in time and to operations connected with mining, rivers, forests and other natural resources, but not limited to new inventions, were perfectly legal under Zeno's law. For instance, the grant of an exclusive privilege to build a paper mill downstream on a river rested upon the state's control of rivers.[109] In effect, such privileges, called "quasi-patents", guaranteed a monopoly in the use of resources by transfer of a state's monopoly. Incidentally, many privileges were granted to processes which represented vital technical improvements for the economic and social welfare of communities. By the same token people became gradually familiar with the new institution which represented an official recognition of their inventive skills. This new form of privilege was the deciding factor in developing the idea of industrial and intellectual property. This was the first step towards institutionalisation of exclusive privileges attributed to individuals by decision of the state.

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[109] The monastery of Chemnitz was granted the exclusive privilege to build a new mill paper "in our country" by the Duke of Saxony, "so long as this mill is workable and working", see [Prager, 1952], at 123-24.

A second step was needed in establishing the modern patent system as we know it. From the principle of "unity of work", gilds inserted provisions in their status protecting the inventive efforts of their members. The intention was to protect quality of production among members, and more specifically to protect their investments from:

> "many fabricators of such material [who] are trying by means of fraud and deceit to steal such patterns from said fabricators."[110]

Clearly, intellectual elements prevailing in new patterns and involving new processes found equivalence in the minds of guilds with technical improvements of new machines. In practice, guilds and corporations were powerless in granting privileges since they did not have the legal authority to grant them. In response, the state decided to grant monopolies in the form of patents to individuals for the prevailing idea of technical improvements; thereby recognising the industrial and intellectual elements involved in new inventions. Gradually patents extended to all other crafts by general usage, and in particular to printing.

*Stationarii* collectively enjoyed privileges from their own university town. As long as they obeyed the *curriculum* regulations, they gained exclusive contracts to provide books for the *universitatis*. The development of trade and the formation of gilds of stationers and booksellers gradually strengthened their trade powers. From non-exclusive privileges they received virtually exclusive privileges. It should be stressed that stationers enjoyed exclusive property in literary productions, not authors. Property in books was created by virtue of the dictating and copying operations involved. In replacing the ancient *ars dictamis* with printing, the converted stationers

[110] Deliberations of the Woolen Guild, cited in [Prager, 1952], at 127.

sought protection similar to patents already in existence. The transition from virtually exclusive privileges to patents met no difficulties. Printing, composed of different processes, fulfilled the new patent system's requirements. Patents were granted for technical improvements in printing processes and tools, for new designs and also for complete sets of compositions. The latter is commonly referred to as a copyright privilege. From the fifteenth to the eighteenth century, the development of printing led to the granting throughout Europe of an increasing number of privileges in the form of monopolies.[111] Three essential characteristics are to be found: an exclusive right of reproduction and distribution, a limited term of protection, and remedies for infringement of the right including fines, seizure or confiscation of the infringing copies, and in some cases corporal punishments.[112] Thus, printers and publishers gained proprietorship in printed compositions involving intellectual creation; thereby recognising intangible property in books. However, copyright represented only a special type of patent. New printing processes were intertwined with composition and production of books. For instance, the invention of the cursive or italic character allowed its inventor to secure a patent for technical improvement and, by the same

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[111] The first fully documented book privilege granted by a lay authority in Northern Europe was given by king Alexander of Poland in Cracow on 30th September 1505 to Johann Haller's publications. Within the kingdom nobody could sell, print or import books which he had printed. Infringing copies were meant to be put on sale for Haller's benefit. He received also the support of Joannes Konarski, bishop of Cracow who granted him on 27th October 1509 a privilege for six years on the Cracow Missal and added the penalty of excommunication to the king's penalties, see [Armstrong, 1990], at 8-21.

[112] The French Ordinances of 1557 and 1560 introduced the penalty of death, similar as for treason, to authors, printers, publishers, and sellers or distributors of books which had been condemned as pernicious or libellous. Further letters-patent of 1563 fixed the penalty of hanging or strangling for the offence of printing a book without the royal authorisation, see G.H. Putnam, *Books and Their Maker*s, Vol. 2 (1896), at 436. Hereafter: [Putnam, 1896 (b)]; In Venice, a book printed without the consent of its author was to be confiscated and burned. Its printer was to be fined and could be forbidden from printing for years or for life, see Horatio F. Brown, *The Venetian Printing Press* (London, 1896), at 78 & 97, Hereafter: [Brown, 1896]

token, to secure a copyright for printed composition in cursive visual effect.[113] In that respect copyright privileges were intended as much as any other patent to secure temporary market monopolies.

The scope of patent monopolies widened gradually to encompass any new form of technical improvement or intellectual creation. As opposed to quasi-patents, patent systems were no longer restricted to improvements in state resources. Therefore, new justifications had to be given, since the traditional legal and philosophical justifications which had prevailed for centuries became irrelevant to the new situation. Two justifications could be found. One was based on the reasoning that investments in labour and capital are required and it is equitable to grant exclusive right to recover such expenditures. Patents represented an industrial safeguard institution, designed to compensate individuals, printers, publishers (and authors as well since they could have been their own printer), for their publication overhead costs and for the commercial risks taken. This interpretation is confirmed by the report made much later by Antoine-Louis Seguier, *Avocat général*, defending the 1777 French royal decrees reforming copyright privileges and other monopolies alike.[114]

This line of thinking leads to a secondary justification. Grants of monopoly rights to inventors increase national welfare in society and induce further inventive efforts. For instance, Hans Werner secured from the Elector John George a privilege "for the furtherance of public interests".[115] Incidentally, both justifications motivated

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[113] In 1501, Aldus Manutius obtained from the city of Venice a patent-copyright for ten years for all works printed in the *"lettere corsive et cancellaresche de summa bellezza non mai piu facta*l" (italic character) which he claimed the invention, see [Brown, 1896], at 47 & 236.

[114] cited in [Dock, 1974], at 164-5.

[115] In France applications for privileges were commonly argued on the basis of public welfare, see [Armstrong, 1990], at 82-83; [Brown, 1896], at 56;

the widespread practice of using patent monopolies as a means of protectionism. Not only did states intend to protect their home industries and economy, but also to prohibit the spreading of licentious publications by censorship.[116]

Ultimately, the two justifications are the expression of one trend: the deliberate intervention in political, economic and social affairs by European states under the cover of public interest. Let us clarify, however, that states had enjoyed exclusive and discretionary powers to grant monopolies before the creation of the patent system.[117] The determining factor which led public authorities to grant individual patents, which intrinsically conflicted with ancient and medieval regulations, was the gradual public support of individual property.[118] More importantly, it seems to me that public approval evolved from fundamental changes in late medieval society accepting the concentration of powers in the hands of central authorities benefiting from the reduction of diluted powers attributed to communities. Therefore, society approved a less collectivist approach in attributing rewards from social progress to a more individualistic one.

The common viewpoint is that, since patents conflicted with prevailing regulations, they represented a considerable break-away from ancient culture. In my opinion, this line of thinking misunderstands the ancient teachings and consequently the reasoning behind the former regulations. Greek philosophers, such as Plato and Aristotle approached the idea of general prize awards critically. Aristotle observed that abuses could occur in the legal and constitutional field if awards were to be

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[116] French Ordonance of 7 March 1537, see [Putnam, 1896 (b)], at 447.

[117] In ancient Greece, cooks seemed to have received from their fellow citizens monopolies for the invention of "peculiar and excellent" dish, see [Prager, 1952], at 114.

[118] [Prager, 1952], at 140.

attributed. Freedom of speech was highly prized in Greek society. It was believed to constitute the corner stone of Greek political liberty. Any means which could have impaired that freedom would have inherently threatened the *pólis*. These criticisms have some validity in looking at the effects of censorship on society. It seems to me that it was no coincidence that political and religious censorship found a servant in the form of copyrights, in effect abusing the motive of public interest. In effect censorship was more largely concerned with the supervision and regulation of the press for the safety of the interests of the state and the Church, than with the protection of literary property. According to a Bull of Leo X in 1515, no licence could be given for the printing of a book until it had been examined and approved by an authority of the Church.[119] The ecclesiastical position on censorship was that no separation was possible between politics and ecclesiastical dogma; therefore it took the authority to supervise literature. The establishment of the Roman Index in 1557 gave precedence to religious dogma. Previously book censorship had been the responsibility of secular authorities, which delivered permits to print seemingly independent of religious censorship. Now grants of patents and censorship control became intertwined to the effect that they finally formed one single process directly involving Church

[119] In fact Pope Alexander VI was the first in 1501 to issue a Bull prohibiting publication of certain books. The Council of Lateran confirmed his decision in 1515.

authorities.[120] Moreover, authorities found among the printers and publishers complaisant allies in exchange for stronger market monopolies.[121]

Censorship regulated three aspects of the book trade: the religious, the moral or political, and the purely literary.[122] Such control was variously perceived and applied among European states. The German states never accepted this interference with their political freedom. Not only was the realm too manifold but also centres of intellectual activity and of publishing enterprise were too numerous to make censorship practical. Let us remember that the Reformation was begun in Germany in 1517 by Luther, who benefited from favourable circumstances. Among many factors, the invention of printing and the reaction of princes and jurists against the encroachments of the papacy favoured the expansion of the new ideas. The Reformation and the typographical revolution got along together very well. Indeed, "By this printing [...] the doctrine of the Gospel soundeth to all nations".[123] A general censorship supervision would have needed the centralisation of local powers into the hands of the Emperor, which politically would have been unacceptable to German

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[120] In 1566 Charles IX of France brought under one single system privileges and permits. According to article 78 of the *Ordinance de Moulins*: "Défendons aussi à toutes personnes que ce soit d'imprimer ou faire imprimer aucun livre ou traiter sans notre congé ou permission et lettres de privilèges expédies sous notre grand scel, auquel cas aussi enjoignons à l'imprimeur d'y mettre et insérer son nom et le lieu de sa demeurance, ensemble ledit congé et privilège, et ce sur peine de perdition de bien et punition corporelle.", see Jourdan, Decrusy and Isambert, *Receuil général des anciennes lois françaises*, Vol.18 (Paris, 1826), at 210.

[121] The Worshipful Company of the Stationers of London, and its French counterpart the *Libraires Jurés*, are prime examples.

[122] In 1527, Alvise Cynthio published a work on the *Origin of Vulgar Proverbs* which obtained a Senate copyright for ten years. The Franciscans found some objections to the books and registered a complaint on the ground of indecency and heresy. Regarding the moral of literature, political morality or the attitude of writers, publishers towards the State in Venice, see [Brown, 1896], at 60.

[123] John N. Wall, Jr., *The Reformation and the Typographical Revolution: "By this printing ... the doctrine of the Gospel soundeth to all nations"*, in *Print and Culture in the Renaissance Essays on the Advent of Printing in Europe* (London, 1986), at 208-221

princes and their subjects.[124] As a result, religious censorship was no more effective or consistent than politics alone in the first place.

Nonetheless, when both interests could meet, censorship worked efficiently. For instance, in France censorship was only admitted upon the condition that it should always be exercised under the authority of the Crown. Centralisation and absolutism facilitated the introduction of censorship as an institution. In 1521 it was officially introduced in the realm by Ordinance of Francis I.[125] Jurisdiction was conferred on the University of Paris where religious works had to secure the approval of the Faculty of Theology, and profane works that of the Faculty of *Belles Lettres* before being published. The University approved, granted privileges and fixed penalties as late as 1789.[126] In Italy, the Church authorities directly as censors. Italian states were concerned with the supervision and regulation of printing for the safety of the Church as a vassal of the Holy See. From all this it follows that copyright, as a means to provide enough economic incentive to develop and help literary creations, became a means to control literary undertakings, hampering literary development.[127] Intellectual property was then fostered and fashioned according to public interest motives which ought to protect religious and political dogma.

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[124] The emperors did not accept the Vatican interference on their authority. The imperial authority for the regulation of the Press was derived from or connected with the rights reserved to the emperor under the Golden Bull, [Putnam, 1896 (b)], at 417.

[125] *"Lectum est quoddam regis mandatum prohibitorium ne librarii aut typographii venderent aut ederent aliquid, nisi auctoritate universitalis et Facultatis Theologiae, et Visitatione factal"*, (Printers and publishers are forbidden to print or sell any work which has not first been examined by the University authorities and received the authorisation of the University and of the Faculty of Theology), cited in [Putnam, 1896 (b)], at 441

[126] Fancis M. Higman, *Censorship and the Sorbonne* (Genève, 1979), 15 & 23.

[127] [Brown, 1896], at 147.

All this goes to show that the position of authors must have been difficult between complaisant printers, religious and political censorship, and the authorities. It is obvious that most authors, printers, or publishers were not willing to risk their life or business in publishing licentious publications. This brings us to consider more closely their situation in light of the procurement of copyright privileges. In effect there was no valid patent without a technical improvement of considerable inventive merit, and consequently no intellectual property without intellectual creation involved. Unlike quasi-patents, patent monopolies found grounds directly in creative inputs and not solely in the introduction of manufactures beneficial to public welfare. In other words, the intellectual property concept turned into the decisive criterion in recognising personal monopoly rights, instead of the public benefits derived from mere expansion of the industry. According to the successive legislation of the Venetian Republic, a publishing applicant could secure five types of privileges.[128] Protection could be secured for new books, maps, charts, musical works, illustrations, and engravings.[129] Moreover, such privileges were attributed to printers and publishers as well as to authors. The first kind of privilege represented a simple monopoly under which the Republic granted to the beneficiary for a term of years the sole right to print or to sell a whole class of books such as official or legal documents, past authors of classic time, and compositions in particular languages.[130] Another

[128] The legislation of the Venetian Republic may be considered as mere ontinuous and complete in regard to copyright privileges than in any other European state. Legislation was introduced as early as the thirteenth or fourteenth century. The first law regulating copyright privileges was promulgated in 1517, see [Brown, 1896], at 50.

[129] [Brown, 1896], at 41; see [Armstrong, 1990], at 165.

[130] In Venice, privileges were given in books of Arabic, Moorish, Syrian, Armenian, Indian, Barbary, Marc' Antonio da Bologna's system of printing music. For instance, in 1496 privilege was granted to Baldus Manutius for a term of twenty years for all books printed in Greek text, see [Brown,

class of privilege secured to authors a copyright in their own production.[131] A third class of privilege could be secured by editors or publishers for works not of their own literary production. This class was by far the most commonly sought privilege. A fourth kind more of the nature of a patent could be secured for improvements in the art of printing and for specific classes of literature. A typical example would be the case of Aldus Manutius who secured in 1501 patent and copyright privileges for the use of cursive characters which also possessed the special advantage of compactness.[132] A fifth kind of privilege had for its purpose the protection of the printing and publishing industry as a whole against the competition of foreign rivals. The position of authors was reinforced a special law in 1545, by requiring consent from authors in order for publishers to secure copyright in new works.[133]

An important aspect of these privileges is the predominance of economic rights and duties attributed to grantees. Copyright defines an exclusive right to publish a work with the legal guarantee securing a return on the investment of the publisher. Therefore, books represented a commodity which had a commercial value and could be used to generate an income. If there was to be any individual property in literary production and if there was to be any assured return for publishing risk, it was necessary that some authority constituted a consistent and uniform legal system which

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1896], at 43, 79 & 237; As regards compositions, Geoffroy Tory obtained a privilege protecting original illustrations and decorations contained in his books, see [Armstrong, 1990], at 205.

[131] Antonio Sabellico secured from the Venitian government copyright on his publication *Decades rerum Venetarium* on 1st September 1486. The concession secured literary ownership in his work for apparently an indefinite term. This is believed to be the earliest recognition by a European government of authors' copyright in their own work, see [Brown, 1896], at 53 & 236.

[132] [Brown, 1896], at 47

[133] In the year 1544-5 a decree was issued by the Venetian Republic forbidding anyone to print or to sell a work without having first presented to the *Riffformatori* (the university commissioners) documentary proof of the consent of the author or of his representatives, see [Brown, 1896], at 79.

should act for an entire territory to protect the publishing undertakings. Patents, and especially copyrights, were found to be effective property control systems by investors, justifying investments in labour and capital. To illustrate the truth of this, Leonardo Crasso's edition of the work *Polifilo vulgar* was granted a prolongation of copyright in 1508-9 on the grounds that the wars had prevented him from getting back his investment.[134] Moreover, the scope of copyright protection extended to precise economic rights and duties. Individual property was embodied into law by temporary monopoly property over intellectual creations, fully analogous to property in a material creation, although duration of protection varied greatly. Monopolies granted to publishers could last from one year to fifteen years.[135] After expiry of privileges, works fell in the public domain; however, privileges could be extended if the work sold well and if there was a need for reprints.[136] As an exception, authors were to be granted perpetual privileges in their work.[137] Copyright protection could run from the date of application or from the date of publication. Therefore, privileges granted by authorities established only a limited monopoly in time for the printing and sale of books. In effect, copyright protected publishing parties against outside competition. Attribution of copyright was conditional not only upon written consent of authors but

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[134] Leonardo Crasso received the prolongation of copyright on *Polifilo vulgar, opera molto utile et fructuosa et de grandissima elegantia*, see Document II: Analysis of the number of monopolies, copyright and patents (1469-1596), see [Brown, 1896], at 237 & 58.

[135] [Armstrong, 1990], at 118.

[136] [Armstrong, 1990], at 199; Legislation in the Venetian Republic on the public domain, see [Brown, 1896], Appendix.

[137] Ronsard was issued a perpetual privilege on his works, see [Armstrong, 1990], at 27; Peter of Ravenna received a copyright for an unspecified term for his work *Phoenix* in January 1492, Giorgio di Monferrato in 1496, see [Brown, 1896], at 236.

also quality of final products.[138] Thus, protection of the book-buyer against bad workmanship and exorbitant charges was established. Control was exercised on the text and the level of technical skills involved in order to ensure high quality in finished products. Also, proof of authenticity was often given by means of an impression or matrix acting as a seal.[139] Price control was exercised by government and integrated within the privilege terms. The intention was to set fair prices in order to make publications accessible to the public at large and further public education.[140] Moreover, speed in production could condition the validity of certain privileges. For instance, some works had to be published within a certain date or at a certain pace per week.[141] Finally, protection of the moral, religious, economic and political interests of states implied that control and censorship were used against licentious publications, often with the help of guilds administering the trade. As a result, many formalities had to be complied with, such as mandatory deposit of copies in official libraries in order to validate copyrights.[142]

From all this, it follows that attention was concentrated on the economic powers of holders of capital who monopolised printing processes. Copyright-privileges were not designed as a means of protection of recognised economic rights as such for authors. Moreover, the purpose for authors in securing privileges was not

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[138] The creation of guilds persued the goal of excellence of workmanship by ensuring that every entrant were highly qualified, see examination for those who seek matriculation in the guild of booksellers, see [Brown, 1896], at 186.

[139] Charles Talbot, *Prints and the Definitive Image*, in *Print And Culture in the Renaissance Essays on the Advent of Printing in Europe*, G.P.Tyson & S.S.Wagonhein, eds., (London, 1986), at 199.

[140] [Armstrong, 1990], at 73.

[141] [Brown, 1896], at 57.

[142] A French ordinance of 7 March 1537 required deposit of one copy in the *Bibliothèque Royale* of Blois. This edit was not only the first step toward the constitution of a national library to preserve national literature but also a secure means to facilitate censorship, see [Putnam, 1896 (b)], at 447.

so much to protect themselves from plagiarists as to prevent or impede competition.[143] Clearly, printers, publishers, and authors alike gained a secure property title in order to allow them to monopolise the publication of books for a limited period of time.

Nonetheless, the position of authors remained a complex one since the materials for sale originated from their own genius. Therefore, it would be reasonable to assume that the issue of a privilege constituted simply an official recognition of the author's rights to the product of his mind. On the contrary, such right represented solely the right of authors to put the results of their labour on the market first. Copyright constituted only the legal recognition of the existence of economic rights attributed to publishing parties, publishers or authors alike. In practice, most authors had to content themselves with the assurance of securing circulation of their work by printers or publishers, as they could not bear the cost of securing a privilege and of publication undertakings. It was common practice for printers and publishers to secure copyright privileges on behalf of authors in exchange for their consent "privileges" in order to publish their writings.[144] It would be probably a truism to add that authors were not in a favourable bargaining position, and that abuses arose from printers and publishers. Many manuscripts were published without the consent of their authors and, once published authors lost all economic rights on the works, since the legal title belonged to someone else or the work had fallen into the public domain.

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[143] J. S. Putter, *Beytrage zum Teutschen Staats u. Fursten-Recht*e, Gottingen, (1777), at 97, cited in [Putnam, 1896 (b)], at 415.

[144] Steven Rowan, *Jurists and the Printing Press in Germany: The First Century*, in *Print and Culture in the Renaissance, Essays and the Advent of Printing in Europe*, G.P.Tyson & S.S.Wgonheim, eds., (London, 1986), at 81.

Intellectual creativity was required in order to secure copyright and generate a secured income. Authors had an advantage since applications were conditional upon the criteria of newness. Nonetheless, authors as well as printers and publishers had to comply with other criteria such as accuracy, price, time, and respect of the Index in order to be granted a privilege. Consequently, even though exclusive rights could be granted to authors, this did not act as a recognition of intellectual property. Intellectual property denotes the object of economic and moral rights which is not in the public domain. In our case, commodities were subject to literary property as a legal title. However, it should stressed that this legal title was attributed not by right to authors but solely as the best bidder among other ones. In practice printers and publishers won the competition more often. Literary property was only a title of property granted, and not secured, by government since it did not protect a recognised right stemming from the act of creation. Once privileges expired, editions could be copied freely without any recourse for its author.[145]

Even though authors were not recognised as having economic rights in their work, they imposed respect for their privileges. For instance, Durer's widow, who had secured in 1528 an imperial privilege for her husband's writings, made a complaint about unauthorised sales of his *Instruction in Perspective*. In 1532 the Magistrates of Nuremberg cautioned all the booksellers of the town against keeping in stock or selling any copies of mentioned editions. On the same day orders were sent to the magistrates of Strasbourg, Frankfort, Leipzig and Antwerp with the request that similar orders should be issued in those cities.[146] Nonetheless, there was in certain

[145] [Parent, 1974], at 112.
[146] [Putnam, 1896 (b)], at 410.

scholarly circles a prejudice against the receipt of money for literary work. Luther was in fact much keener on the correctness of the text than on receiving a remuneration. Curiously, Erasmus was also against being paid for his writings. For instance, Ulrich von Hutten had been paid for his writings and Erasmus made it a ground for criticism. Hutten replied that not only was there no reason why reproach should have been made, but also such criticisms came with a bad grace from Erasmus, who had been on the payroll of Aldus Manutius of Venice and Froben of Basel. As a matter of fact, Erasmus was possibly the first author after the invention of printing who was able to secure from the sale of his books any substantial returns. It is evident from various references that those returns were sufficient to make him substantially independent, notwithstanding the fact that pirate editions of his books were printed in Paris, Bologne and elsewhere.[147] Other writers such as the jurist Ulrich Zasius received in 1526 from his publisher in Basel for his *Intellectus Juris Singulares* fifty guldens. However, the general economic situation of authors was certainly not enviable.[148]

It should be stressed that Luther's and Erasmus's objections to pecuniary advantage from writings rested upon different grounds such as the inherent purpose of their respective literary creations. Luther observed that he was working for the cause of the Lord and "Christ had already rewarded him a thousand fold".[149] As regards Erasmus, financial gains helped him to pursue his research and pay for his expenses around Europe. Luther's opinion did not reflect the reality of things. For instance, Conrad Gerner, writing from Lausanne in 1539 complained that "I am, like others of

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[147] [Parent, 1974], at 116.; C. Augustijn, *Erasmus von Rotterdam. Erasmus his Life Works and Influence* (1991); Bruce M. Mansfield, *Man on His Own. Interpretations of Erasmus* (1992).

[148] [Putnam, 1896 (b)], at 432.

[149] *ibid*, at 431.

my class, under the necessity of writing for daily bread". Authors tended not to discuss in public their material preoccupations, and had the naive belief that public opinion or privileges suffice to protect their creations against piracies. Also, most compensations received by authors for their literary undertakings came from initiatives on the part of publishers themselves. The custom of putting author's compensation into the shape of books became used as a means for authors of securing cash receipt.[150] The dedications of books were not simple expressions of personal friendship or of scholarly appreciation, but fulsome laudations and exaggerated flatteries which were meant to be paid for in cash. It appears then that authors were also responsible for the fading of the concept of authorship during the literary renaissance. Two points have to be made. One is that authors in general were not making a fortune from their writings, but that copyright was a means which enabled them to secure a pecuniary right, either as a lump sum or as a rent, whatever was the commercial value of their work. Therefore, contracts were commonly established by notaries stating precisely to what rights or duties authors and publishers were entitled.[151] The other point is that not only pecuniary rights motivate authors to create.

Moreover, I wish to focus attention on the fact that the personal rights of authors were recognised but curiously tended to be analysed from a simple commercial point of view.[152] For instance, Luther himself emphasised the right of the

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[150] Authors seemed to give more importance in compensation into the shape of books than with a direct cash compensation, see [Parent, 1974], at 101 & 111.

[151] [Parent, 1974], at 98.

[152] "The magistrates themselves do not appear to have adhere to their original charge that Andrea and Beham were pirating Durer's work, or they would, instead of prohibiting the publication until Durer book was in the market have enjoined its publication altogether as a plagiarism of infringement. They seem simply to have convinced themselves that Durer's wife and other heirs were entitled to the first fruits of any profits that could be secured from the subject of *Proportio*n", [Putnam, 1896 (b)], at 411.

author in his relations with his readers, and his right to control personally all publication of his works in order to prevent corruption, *Text-Verfalshung*, and inaccuracy.[153] Authors contended along with Luther that the first and chief right of an author was to have his message correctly presented to his readers. Moreover, authors' copyrights infringed by plagiarism or counterfeits were reprimanded.[154] Even cases of infringement came with the question whether an author's idea should be protected.[155] Most cases show the unease of courts to form opinions on rights which had been recognised since ancient times. In my opinion judges found themselves in a difficult position and in need of legal support. They simply had to use what was at their disposal, and analysed personal rights analogically as economic privileges. Obviously, the handling of cases was really inadequate for lack of proper legislation, but also because the concepts of intellectual property had not yet been affirmed. Furthermore, I venture to say that the judges' attitude proves that personal rights could not be conditional upon one technology, and especially printing, or upon the material form of

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[153] "There are many now busying themselves with the spoiling of books through misprinting them", *Geschischte der Deutschen Bibel-ubersetzung des Luther*s, cited i*n* [Putnam, 1896 (b)], at 408.

[154] In 1512 complaint was made to the Magistracy of Nuremberg that a certain man was offering for sale some prints or drawings which pretended to be the work of Durer and which bore Durer's signature, but that both the design and signature were counterfeits. The Magistrates decided that such sales of prints had to be stopped and that the copies sold had to be confiscated, [Putnam, 1896 (b)], at 410.

[155] Durer's treatise on *Proportio*n was being put into print in Nuremberg by Hieronymus Andrea. In conjunction with the latter a painter named Beham had in preparation a work on the subject of *Proportio*n. In July 1528 the Magistrates of Nuremberg issued an edict forbidding them from proceeding with the publication of their volume until the publication of the authentic work *das rechte Wer*k had been completed. Beham protested that his volume was entirely original and quite distinct in its plan from that of Durer. However, the Magistrates decided that on the ground of the idea of a treatise on the subject had originated with Durer, he or his heirs were entitled to be protected against any attempt to diminish the *commercial valu*e of the coming publication. This case is valuable on the sense that the concept of moral rights attributed to authors was not unknown to judges However, these rights were only perceived in the terms of their commercial value. Indeed, until Durer's work was on the market and had enjoyed the first profits Andrea and Beham were prohibited to publish their own work. The Magistrates decided that Durer's wife and other heirs were entitled to the first profits that could be secured from the subject of *Proportio*n on the ground that Durer was the first author to give attention to this way of expression, see [Putnam, 1896 (b)], at 411.

the author's expression as opposed to the economic rights. Moreover, I would affirm that copyright as an exclusive economic right is inadequate as a form of intellectual property recognition, since it depends entirely on technological processes. Intellectual property, both as an economic and personal right, needs to stem naturally from authors. Nonetheless, it is of the nature of a truism or self-evident fact that intellectual property needs to be recognised by law in order to achieve its purposes. The system of privileges narrowed down instead of widening the concept of literary property. Property in literary undertakings was solely established upon the criteria of skill and labour expenditures projected on a commodity. It was the creation of copyright and not the affirmation of the natural right of an author to gain financial benefits from his writings and protect the content of his work. Copyright, even liberated from state control such as censorship, is a privileged property granted by states, dependent upon the printing press, and assimilating authors as investors in their own writings and not as creators. Copyright assumes that economic incentives motivate authors or inventors and may be fit solely on economic grounds. Nevertheless, creativity ought to be viewed as a complex process which involves primarily intellectual stimulation and well-being. Financial benefits are only one factor among others which help in the creative process.

I believe that I have demonstrated that copyright-privilege is a property title dependent upon one technology, which concentrates on the economic powers of holders of capital who monopolise processes. Literary property is conferred upon an individual who is granted a privilege and not naturally upon the creator of the work. As a consequence, public authorities grant such a title as a commercial security which

not only allows the state to control, even to censor publications but also has no neutral effect on the creative process and narrows the concept of intellectual property which should to my belief denote the object of economic and moral rights which is not in the public domain. As Plato and Aristotle observed grants of monopolies corrupt states and citizens, as well as distracting people from their vocation. What is needed is a protective and technologically neutral mechanism which affirms the value of products of the intellect in enriching the exchange of ideas and freedom of expression amongst its participants. In order to reach that aim one needs to move from a privilege system based upon two principles, commercial security and public domain, to a liberated system founded upon the recognition of the rights of authors in their work, requiring a commercial monopoly in order to enforce authors proprietary rights, but limited in effect by the public domain.

## *Chapter II*

# THE MODERN LAW *of* COPYRIGHT IN GREAT BRITAIN: PRIVILEGE OR INTELLECTUAL PROPERTY?

> *"Those who started using the word property in connection with inventions had a very definite purpose in mind: they wanted to substitute a word with a respectable connotation, 'property', for a word that had an unpleasant ring, 'privilege'"*
>
> - Machlup and Penrose*

The continuing development of copyright doctrine requires us to understand copyright strictly as a creature of statute and not as a common law property right. Unlike its continental counterpart based upon the natural right of the author, copyright establishes a temporary commercial security attributed to authors or their assigns.

An examination of the historical evolution and subsequent rationales of copyright shows the underlying economic and cultural nature, and purpose of copyright. Copyright weights the rights of creators as investors against the public interest, in other words the public domain. All copyright laws are a systematic measure of these two interests. From prerogatives of the king to the powers of Parliament, such commercial securities are the grant of public authorities and not the recognition of the natural rights of authors in the product of their intellect. The modern legal concept of copyright owes its inception to the rights of patentees under royal grants and to the development of rights of unprivileged printers in the copies lawfully licensed and entered in the records of the Stationers Company. Henry VIII

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* Machlup & Penrose, *The Patent Controversy in the Nineteenth Century*, 10 Journal of Economic History 1950, at 16.

fully initiated the process and Parliament under the reign of Queen Anne gained power to attribute privileges indirectly by statutory enactment. Such enactment recognised the creation of a public domain and the creation of a temporary economic rights vested in authors for their intellectual endeavours. A great deal depends on the accuracy or error of subsequent interpretations of the decisive case, *Donaldson v. Becket,* decided in 1774 by the House of Lords. Nonetheless, the decision of the Lords simply recognised the self-evident fact that copyright is a creation of statute intended to provide economic well-being to authors within the United Kingdom.

This chapter will attempt to show that the current copyright rationales are direct descendants of the copyright privileges created under royal prerogatives and designed to appropriate commodities. As a result, it will argued that such instrumentalist rationales can only be sustained in a defined technological environment such as printing, or any other similar technology which embeds works in material forms. It has a threefold origin independent from statutory action or common law court decision: the patents of monopoly, the licensing system, and the copy records of the Stationers' Company.

## PRINTING PRIVILEGES AND LICENSING

The great question of literary property decided in 1774 by the Lords, clearly established that the Statute of Anne was a British Act which treated printers and booksellers similarly on both sides of the border. Moreover, "while the two kingdoms were under different crowns, and even after the Union of 1603 anything of a mutual copyright did not exist". Although there were not many differencies in the

development of printing between the two kingdoms, it is in England that the development of copyright took a special evolution which was finally concluded in *Donaldson v. Becket* in 1774.[1] Therefore, special attention is given to the early development of copyright in England. The credit for introducing printing in England is given to William Caxton who imported the process from Bruges to Westminster in 1475. Many controversies arise as to whether Edward IV insisted upon Caxton establishing himself at Westminster or whether Caxton himself took the initiative to set up his press.[2] It is more significant to notice that Caxton sought no exclusive privileges from the Crown even though he enjoyed the personal patronage of Edward IV and Henry VII. It would appear then that, like other European countries, the early development of printing in England characterised a new craft, free of any corporate influence and of any state intervention. Following Caxton, numerous foreign competitors established their own presses in England, possibly under the influence of a provision added to the Act of 1484 encouraging foreign printers and booksellers to practise their craft freely within the realm.[3] Incidentally, the first printing privilege is attributed to Henry VII who took the initiative to appoint William Facques in 1504 as the King's Printer. The office secured Facques with the exclusive right to print certain Crown documents, such as proclamation of statutes and common law books, and to supply the royal family with new publications.[4] This royal intervention may have

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[1] See, Gordon Donaldson, *Scotland, James V-James VII* (Edinburgh, 1965), at 261-62; Edward J. Cowan, *The People's Past* (EUSPB, 1980), at 34-35; Association of Scottish Historical Studies, *Dissent, Protest and Rebellion in Pre-Industrial Scotland* (St. Andrews University, 1987), at 62 ff.

[2] Lotte Hellinga, *Caxton in Focus: The Beginning of Printing and Translator*, (London, 1982).

[3] 1 Ric. III, c. 9.

[4] William Facques held the office from 1504 to 1508. He was followed by Richard Pynson (1508-1530), Thomas Berthelet and others. After the Restoration this office had become the property of John Bill and Christopher Barker. In 1666 the patent-monopoly was assigned to H. Hills and Thomas Newcomb and in 1689 became the property of Charles Bill and Thomas Newcomb.

initiated the long and consistent interventionist policy observed by the crown. Its policy was carried out through instrumentalities based upon the authority of the prerogative or, in other words, upon powers inherent in the office of the king, especially in Tudor times, until 1709. Through royal proclamations, licences, patents of monopoly and decrees, exclusive prerogatives controlled and regulated the press in a unique form of intervention in Europe. This system was composed of two distinct but indissociable institutions: the licensing system and the incorporation of the *Worshipful Company of Stationers of London*.

In the 1520s the Privy Council had been increasingly vigilant about books on controversial religious and political matters.[5] The Catholic Church wanted to prevent the importation of reformed ideas and consequently of books containing such contentions. Henry VIII, who himself was just entering into political and religious controversies, was only too willing to strengthen the authority of the crown over the press. In 1534 the Act of Supremacy was passed, and by 1535 the clergy had submitted to the king to be followed in 1538 by a royal proclamation introducing a formal requirement prior to publication. Approval in the form of a licence needed to be secured from the Privy Council in order to print.[6] Clearly the intention was to control political and religious opposition to Henry's Church. As a result, the rights of royal patentees rested upon the authority of the crown and its prerogative to control and regulate printing. Any attacks upon the legality of these rights or any infringement of his proclamations necessarily resulted in a conflict between the alleged infringer,

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[5] Fredrick S. Siebert, *Freedom of the Press in England 1476-1776* (University of Illinois Press, 1952), at 43-46, Hereafter: [Siebert, 1952]

[6] [Siebert, 1952], at 48-50.

on one side, and both the patentee and the crown, on the other. Based on the royal prerogative, the authority to issue proclamations had the force of law, giving the king wide powers over fields left untouched by statute or common law.

Without an effective enforcement body, the licensing system would have encountered difficulties in being respected. The authorities took the initiative to assert control over the presses in order to impose a licensing scheme on the book-trade. The claim to control the book-trade was valid in the sense that the Crown, concerned with the contents of controversial books on religious and political matters, intended to maintain peace and order within the realm.[7] Nonetheless, it is clear that freedom of expression was of no concern to the crown. Distribution of information on these matters was treated simply as a state prerogative. Following this line of thinking, the crown considered that all acts of printing were within the royal prerogative, and consequently should be done under the direct supervision of the crown. Mary I, a devout Catholic who found herself unpopular in her attempt to reconcile the divergent religious elements, re-organised the licensing system to that effect. On 4 May 1557, she granted a Royal Charter establishing the *Worshipful Company of Stationers of London*, better known under the name of the *Stationers' Company*, since it became impossible for the Crown to control the book-trade effectively.[8] In 1559 Elizabeth confirmed the charter, to strengthen the powers granted to the members. The company

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[7] John Feather, *Authors, Publishers and Politicians: The History of Copyright and the Book Trade*, 12 European Intellectual Property Review 1989, at 377, Hereafter: [Feather, 1989]; Leona Rostenberg, *The Minority Press and The English Crown. A study in Repression 1558-1625,* (New York, 1971), at 18

[8] A society of writers of text letters existed before that time. In 1403 those "commonly called limners, and others good folks, citizens of London, who were wont to bind and sell books" formed into a craft with "good rules and governance" presided by two wardens. The word "stationer" was applied to all the various members of this joint craft, William Holdsworth, *A History of English Law*, Vol. 6, (London, 1937), at 862, Hereafter: [Holdsworth, 1937]

had the unique privilege in England to regulate all aspects of the book trade from the supervision of apprentices, the number of presses and printing houses, to license, print, bind, publish and set prices.[9] In institutionalising the trade under one guild, not only did the Crown gain secure control over distribution of information, but it also changed the very idea and practice of copyright privilege as applied in other European countries. In effect, Henry VIII established a quick, incisive and effective method which intertwined a licensing system with patent and copyright privileges under his personal supervision where rights to print extended over publication of books of any kind. Inescapably, certain legal implications evolved with regard to literary property which greatly influenced the early development of modern copyright law in the United Kingdom.

The right of the crown to regulate the printing press can be explained by the political and social conditions of the time and the political will of the crown. It had been a prerogative of general practice for European authorities to confer patents upon individuals in order to protect home industries as well as to make themselves sole patrons of the destiny of new industries.[10] For instance, Henry VII, known as a patron of letters, gave the first official recognition to printing in the appointment of William Facques as the King's Printer, showing his interest in the welfare of the realm. After all, official documents which emanated from the crown itself were ultimately the king's own property. Moreover, in securing a patent monopoly on certain classes of

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[9] Letters Patent of May 4, 1557. The Stationer's Company's Charter was confirmed in 1558 and interpreted by the Company's own ordinances in 1562. A royal proclamation in 1559 reinforced its privileges. In 1566 an Order-in-Council recognised the practices and was again reinforced through decrees of the Court of the Star Chamber, Decree of June 23, 1586 and of July 11, 1637.

[10] E.W. Hulme, *History of the Patent System Under the Prerogative and at Common Law*, Law Quaterly Review, XII, at 141-54, and XVI, at 44-56.

books, the crown was assuring wider dissemination of its legislation and information among its subjects. Nonetheless, there is still the need to explain why the crown claimed printing as part of its own prerogative. It can be argued that the Tudors tended to establish their authority *de facto* as opposed to the Stuarts who, more concerned with constitutional misgivings, adopted a *de jure* attitude. Historical circumstances produced different approaches to similar problems.

> "From Henry VIII to Elizabeth, the English sovereigns acted upon the principle that the peace of the realm demanded the suppression of all dissenting opinion and furthermore that the crown itself through its prerogative was the only instrument of carrying through such a programme."[11]

As the trade in printed materials increased and later extended into the field of religious and political controversy, the crown took direct control of the new craft. Only one step was needed in order for the crown to extend its own prerogative on printing official materials to any other material. On the one hand, as patrons of new crafts, central authorities could easily monopolise the trade, having the motive of controlling dissemination of information.[12] On the other hand, worn out by dynastic struggles, England found peace with the first Tudor and was not willing to fall again into a civil war. Therefore, theoretical liberties would have been considered useless in a state of perpetual turmoil.[13] Henry VIII and Elizabeth I succeeding in identifying themselves with the popular conception of peace and national unity and could adopt an aggressive policy in order to reduce opposition to a minimum.

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[11] [Siebert, 1952], at 25.

[12] Similarly in Scotland, the soveriegn claimed exclusive control both of the process and of the products, on the assumption that "everything that might have a bearing upon the peace and security of the realm" ought to be controlled by the crown, see Rev W J Cooper, "Records of the Glasgow Bibliographical Society" vol 9 (Glasgow, 1931), at 43.

[13] *ibid*, at 26.

It is no coincidence that the crown succeeded in receiving the support of the London stationers. In medieval times, the formation of corporate organisations had become part of Europe's communal heritage. Although in many cases guilds developed out of groups of a social and religious character, they were primarily characterised by a concern for economic and above all artisan-manufacturing interests and policies. The printers and booksellers of England were undoubtedly members of printing craft organisations in order to oversee and to regulate the activities of all practitioners in the region controlled by the town. Guilds clearly combined juridical, political, religious and social aspirations; however, the economic motive of establishing a corporate monopoly was primary.[14] As such, the Company of Stationers combined many of these traditional goals, but was a direct reflection of the seizure of the crown on the book-trade. It aimed not only at maximising the volume of the trade and the consequent benefits to the town and its own merchants, but was also concerned with maintaining a steady volume of business for their members.[15] There was a mixture of public and self-interest in its policies. The Stationers' Company distinguished itself from other European guilds in the sense that it had an exceptional political role. Most European guilds shifted from social to economic priorities and moved away from social solidarity to mere collective self-interest within the group. At the same time they changed their liberal policies to protectionism in order to become promoters of monopoly. Following that movement, the Stationers Company, once embodying equality among its members, secured continuity of work and income for

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[14] Antony Black, *Guilds and Civil Society in European Political Thought from the Twelfth Century to the Present*, (London, 1984), at 8, Hereafter: [Black, 1984]

[15] [Black, 1984], at 8.

its members, and above all maintained a fixed number of small independent printing masters. To this end, it sought to limit competition, restrict membership, and moreover became exceptionally involved in the polity of the state. As opposed to other guilds, the Stationers' Company had not only a national economic role but also a political role at a state level by means of power sharing between the crown and the guild in the form of an oligarchy. Combining these aims, it became the instrument of the crown's economic and political policy to form an integral part of the licensing system. As such, the masters of the guild became the cornerstone of the polity by controlling the corporate body.[16]

In the first place the letters patent gave wide powers for the control of the printing craft. Printing was limited to the members of the London Company or such others as secured a special licence from the monarch. Not only did members of the Company maintain their own monopolies, but at the same time the Charter created a structure of membership designed to safeguard a limited number of printers. According to subsequent Star Chamber Decrees, printing presses had to be registered, and printing was "prohibited outside the city of London except at Oxford and Cambridge."[17] Furthermore, the right to print was reserved to master printers who, limited in numbers, were nominated by the Court of Assistants to be presented for appointment to the High Commission for Causes Ecclesiastical.[18] In the second place, printing patents were monopolistic grants by the crown as distinguished from copyrights, which arose out of prior registration in the books of the Stationers

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[16] *ibid*, at 67.
[17] [Siebert, 1952], at 69.
[18] *ibid*.

Company. These privileges provided the only protection available against illegal printed materials. The Court of Assistants or Star Chamber considered any infringement, since patents, and subsequently copyrights, originated from royal prerogatives and not from Parliament or courts of law. Added to that, the principal function of the Company was to detect and prosecute "scandalous, malicious, schismatical, and heretical" publications, especially during the reign of Elizabeth I and the Civil War. In the performance of this task, the system of registration of published books adopted by the Company was an invaluable aid. All books and pamphlets including "title, epistle, poem, preamble, introduction, table and dedication" must be licensed and registered in order to print.[19] In practice, for self-protection they refused to register any books which would be politically unacceptable. In this way, stationers became *de facto* censors.

With regard to the concept of literary property, many implications may be drawn. The right to print was dominated by a small group of influential patentees from London, competing against each other, but ready to defend their royal prerogatives. Fees were charged by master printers in order to allow other members to print. The stationers protected copyright in such a way that it had come to be in substance a right of property. They received powers to protect their copyright by

[19] Registration was made mandatory in 1637 and in 1662 the Printing Act, concerned with pre-publication censorship, required registration for all new books as proof of ownership, see respectively *Star Chamber Decree* and "*Act for Preventing the frequent Abuses in printing in seditious, treasonable, and unlicensed books and Pamphlets, and for regulating of Printing and printing Presses*" (13 and 14 Car. II, c.33; 16 Car. II, c.8), renewed in 1664 until 1679 (16 and 17 Car. II, c.4), and revived in 1685 until 1694 (1 Jac. II, c.17, sec. 15).

having been recognised by the bye-laws of the Company and statute laws.[20] Therefore,:

> "The register of the Company listing the fees for permission to print took on a new significance as these entries became useful in establishing ownership of copies. This new use of the register resulted in a change of for "Licensed vnto him" becomes by the end of the sixteenth century "Entered vnto him"."[21]

The Company kept records of all licensed books held by the printing houses and members of the guild. Incidentally these records became extremely valuable as proof of ownership. The simple act of registering a book sufficed to give an exclusive and incontestable title to the book registered under one name. As a result, the act of registration gave clearness and precision to the idea of copyright, and subsequently to literary property. Patent monopolies in books, and subsequently copyrights, could be sold, exchanged, assigned, subdivided, released by one partner to another, or settled in trust, and of course inherited.[22] Also, some printers were recognised to have copyrights in unprivileged copies fully licensed by censors which they first published without any registration.

Curiously, duration of ownership is not stated unless it is expressly stated in the letters patent. With no duration mentioned, it could be assumed that patents were perpetual. Also, as a form of property, it could be considered to be perpetual, unless a general enactment expressly limited it. This is an important point which would be of consequence in interpreting the 1709 Copyright Act. The by-laws of the Company provided, however, that all rights in a book, which was out of print and which the

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[20] 14 Char II, c33, par.5, recognises that copyright is granted wither by virtue of a riyal patent or by the Stationers' Company.

[21] [Siebert, 1952], at 77.

[22] Edward Arber, *A Transcript of the Registers of the Company of Stationers of London, 1554-1640*, Vol. 2 (1875), at 43.

owner failed to reprint, should lapse and become open for the benefit of the poor craftsmen of the company.[23] In the case of the translation of a privileged book, the printer of the translation owned the copyright and not the owner of the work from wich the translation had been made from.[24] The printer was listed on the title page only as the assignee of the holder of the privilege. Curiously, the ordinance of 1637 established provisions protecting the privileges of authors, printers, or publishers as the sole right of printing certain books. In practice, copyright provisions were so closely bound up with both the exclusive printing privileges of the Company and the patents on classes of books that by practice authors were denied any right on their creations once they handed over their manuscripts for printing. This policy was pursued until 1694, when the House of Commons refused to renew the 1662 Printing Act. It was then the end of Henry VIII's licensing scheme, and also the end of the only legal basis for copyright protection that the Company had.[25] In effect, it may be stressed that patent rights furnished the model for modern copyright, with the licensing register as evidence for literary ownership. Consequently, copyright privileges could not find grounds in common law. The royal prerogative and the Court of Assistants reflected directly the policy of the crown.

Under the Tudors, patents of monopoly served three purposes. Their policy allowed control in the interests of the state, protection of the monopolies of master printers in the trade, and pay offs for opportune deserving supporters without dipping

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[23] An Order of 1588 stated that if a book was out of print, and, after warning, the owner of the copy did not reprint within six months, any member of the company could do so, provided that the author did not refuse,and the owner of the copyright was given such part of the profit, see [Holdsworth, 1937], Vol. 6, at 365.

[24] W.W. Greg, *Records of the Court of the Stationers'Company* (London, 1930), at 7.

[25] R.C. Bald, *Early Copyright Litigation and its bibliographical Interest*, 36 Papers of the Bibliographical Society of America 1942, at 81-96.

into the royal treasury. In addition, the Stuarts used it as a means of raising money.[26] As such, they extended printing patents to many different fields of the printing trade: for instance, newspapers. In the early seventeenth century the crown struggled to impose its policy. As Antony Black remarked:

> "Parliament [...] while it tolerated monopolies in foreign trade, was less favourable to domestic monopolies, from which the crown derived considerable benefits."[27]

The new principles of commercial freedom, or *laissez-faire*, could not fail to have an effect upon the monopolistic printing trade in the Seventeenth Century. Clearly, the liberal policy established under the reign of Richard III allowing foreign printers and booksellers to establish their presses in England was in complete opposition to the restrictive policy of his descendants.[28] Moreover, Sir Edward Coke posed the problem with commendable clarity in the early seventeenth century. He "regarded privileges as no better than other forms of monopoly" and "ruled against guild privilege, on the ground that it was a breach of 'liberty of the subject', even appealing to *Magna Carta*".[29] First, trade monopolies were hampering the development of trade, and second, they restrained the freedom of the people, especially literary expression. In 1621 the House of Commons asked the king to recall the more oppressive grants, and in 1624 enacted the Statute of Monopolies which placed the control of monopolies under the courts of common law. Nonetheless, as the following passage shows, printing patents and grants of chartered companies were excluded from the purview of the statute:

> "...and be it enacted that this act or any declaration, provision, disablement, penalty, forfeiture, or other thing before mentioned shall not extend to many letters patents or

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[26] [Siebert, 1952], at 128.
[27] [Black, 1984], at 159.
[28] 1 Rich. III, c.9.
[29] [Black, 1984], at 159.

> grants of privilege heretofore made or hereafter to be made of, for or concerning printing."[30]

As a result, the legality of these grants could not be questioned in principle. It should be stressed, however, that placing the control of monopolies under the courts of common law was an important step which initiated a debate on the legality of monopolies. Added to that, general opposition to domestic monopolies was not lacking among unprivileged guild members. The Levellers, for instance, supported the idea that domestic monopolies should be condemned but that craft-guild regulations should be retained in order to extend franchises equally to all craftsmen and journeymen.[31] A Prime figure of his time, John Lilburne, member of a republican faction, supported claims and petitions to Parliament on the ground of total social equality.

Journeymen printers had already petitioned Parliament in 1614 against the decree of 1586 which deprived them of the right to set their own press to benefit master printers.[32] Nevertheless, the case of Thomas Symcock, who in 1618 was granted exclusive rights to print all *Briefs* printed on one or both sides of a single sheet, accelerated the downfall of royal patentees. In July 1629, Charles I referred to the Court of Chancery following a report from a commission condemning the grant. It was the first time that a law court was allowed to consider the legality of a printing patent. The court decided on the cancellation of the patent, following the opinion of the commission, which considered Symcock's patent "verie dishonorable" and "exceeding hurtful to the commonwealth".[33] Such a decision has to be put in its

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[30] 21 Jac. I, c.3.
[31] [Black, 1984], at 127.
[32] [Siebert, 1952], at 132.
[33] *ibid*, at 133.

political and legal context. The king being the final authority on the matter of printing patents, the decision of the court as a legal precedent was weak. In 1632 the case *Mounson v. Lyster* established that some patents were not valid.[34] The question of the validity of patents was again presented to the court of Parliament in 1666 by Richard Atkyns. It was decided that the king through his prerogative powers could legally grant an exclusive patent for the printing of law books. The Company "brought an action of debt against Seymour for printing Gadbury's Almanac without their leave."[35] Almanacs were under the government of the Archbishop of Canterbury and considered "*prerogative copies*" with no particular author. Moreover, it was established that:

> "[...] since printing has been invented, and is become trade, so much of it has been kept inclosed never was made common : but matters of State, and things that concern the Government, were never left to any man's liberty to print that would."[36]

The Stuarts, as opposed to the Tudors, tried to find legitimacy from court decisions and Parliament, since they were concerned with constitutional questions. The Company strengthened by injunctions from Chancery its royal patents in almanacs, books of laws, and against importation of books from Holland.[37] It was argued that the statute 21 Jac. 3, c. 3, against monopolies clearly excluded "patents for sole printing". The act of Richard III allowed all foreigners to import and sell books; however, the act of Henry VIII established "that none shall buy or sell again any imported books ready bound, otherwise that in gross, and not by retail".[38] Once again, crown prerogatives restraining the liberty of the subject were justified by state

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[34] *Mounson v. Lyster*, King's Bench, 1632, 82 Engl. Rep. 122.
[35] *The Company of Stationers v. Seymour* (1677), 86 Engl. Rep. 865.
[36] *ibid*, at 866.
[37] *The Company of Stationers Case*, Chancery (1681), 22 Engl. Rep. 849, 854 & 862.
[38] *The Company of Stationers v. Lee* (1682), 89 Engl. Rep. 927.

interests in the trade and public order. Also, importance was given to the bye-laws of the company:

> "it was urged that [the Company] had quietly enjoyed the sole printing of these books [...] and that all particular members of the company have distinct shares and benefit in the printing of them according to the stock they put in, by virtue of a bye-law of the company"[39]

Once again in 1709 the court was asked to rule on the validity of the almanac patent but "no opinion was given".[40] In that year Parliament voted on the Copyright Act.

Nonetheless, it is essential to understand that even though the centre of authority was shifting from the crown to Parliament and that master printers shifted their allegiance to Parliament, the overall state policy did not change. Parliament enacted, for instance, an Ordinance for the Regulation of Printing on June 14, 1643.[41] The enactment of the Ordinance confirmed the transition from control of the press by the crown to give jurisdiction to Parliament. The Stationers Company agreed in return for the protection of its monopolies and property in copies to assist Parliament in suppressing licentious publications. The Restoration brought with it the Printing Act of 1662 which confirmed the rights of both the royal patentees and of the owners of copyrights "for preventing the frequent abuses in printing seditious, treasonable, and unlicensed books and pamphlets and for regulating of printing presses".[42] In fact, the cases brought to court had an effect on the Company's patents (and incidentally the prerogatives of the crown on printing) but not on the more fundamental questions

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[39] *ibid*

[40] *The Company of Stationers v. Partridge* (1709), 88 Engl. Rep. 647.

[41] The ordinance ordered that no other book was to be "printed, bound, stitched, or put to sale" unless both licensed and entered in the register. The copyrights of the company and private persons were not to be infringed, either by printing or importing printed copies, see [Holdsworth, 1937], Vol. 6, at 371.

[42] 14 Charles I I, c.33.

such as freedom of the press and especially literary ownership. Nonetheless, many writers and pamphleteers attacked the Ordinances, in other words the *status quo*. For instance, William Walwyn, a religious and political writer, reached a theory of liberty of the press through his effort to secure religious toleration. Another writer, Henry Robinson, advocated freedom of discussion and the right of private judgement as a necessary adjunct to the economic principles of private enterprise and private property as presented by the new principles of commercial freedom. Analogically, he developed the doctrine of free conscience as the most practical method of hurdling theological questions.

> "No man can have a natural monopoly of truth, and the more freely each man exercises his own gifts in its pursuit, the more of truth will be discovered and possessed."[43]

John Milton, rightly in my view, posed the problem in different terms. He defended literary expression with freedom of expression in which the state had a role to play. In 1644 Milton made his point thus:

> "I deny not but that it is of greatest concernment in the Church and Commonwealth, to have a vigilant eye how Bookes demeane themselves as well as men; and thereafter to confine, imprison, and do sharpest justice on them as malefactors : For Books are not absolutely dead things, but do contain a potencie of life in them to be as active as that souls was whose progeny they are; nay they do preserve as in a violl the purest efficacie and extraction of that living intellect that bred them. I know they are as lively, and as vigorously productive, as those fabulous Dragons teeth; and being sown up and down, may chance to spring up armed men. And yet on the other hand, unlesse warinesse be us'd, as good almost kill a Man as kill a good Book; who kills a Man kills reasonable creature, Gods image; [...] We should be wary, therefore what persecution we raise against the living labours of publick men, how we spill that season'd life of man preserv'd and stor'd up in Books;"[44]

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[43] William Haller, *Tracts on Liberty in the Puritan Revolution* (1934), I, at 69.

[44] John Milton, *Aeropagitica; A Speech of Mr. John Milton, For the Liberty of unlicensed Printing, to the Parliament of England* (24 November 1644) The Legal Classics Library (New-York, 1992), at 16-18; see also, Charles Blount, *A Just Vindication of Learning: or, An Humble Address to the Gigh Court of Parliament In Behaf of the Liberty of the Press, by Philopatris* (London, 1679), in *Classics of English Legal History in the Modern Era* (London, 1978), at 3 & 7

Clearly, literary expressions reflect their author's soul or personality and deserve respect as much as all mankind. Milton does not refer directly to literary property; however, his concerns raise the issue of freedom of expression and implicitly the economic right for authors to dispose freely and control their own creations.[45]

As for literary ownership or individual copyrights, as long as the Act for the Regulation of Printing was in force there was at least some semblance of legality attached to the ownership of a copy which had been entered in the Stationers' Register. With the expiration of the Act in 1694 the Company found itself incapable of enforcing its own bye-laws, especially against stationers who were not members. Extended discussions at Parliament started in 1694, to produce finally the Copyright Act of 1710.[46] In fact, the Lords wanted to renew the 1662 Act with minor amendments, but the Commons ordered a new draft. The trade petitioned Parliament to safeguard their property rights in copies and argued that, unless the Act continued, the printing trade would be "open to all Persons; which may not only be of dangerous Consequence to the Government, but will be ruinous to the said Trade."[47] The House of Commons refused to renew it by emphasising the commercial restraints contained in the draft.[48] The Commons grounded its reasoning on John Locke's argumentation against the un-natural monopolies of the Stationers Company. It pointed out that the monopoly system under the letters-patent, as confirmed under the Act legalising

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[45] "Augustine Birrell is right to suggest that John Milton was making no declaration for author's rights when he exclaimed in *Aeropagitica* about "the just retaining of each man his several copy, which God forbid should be gainsaid."", see Benjamin Kaplan, *An Unhurried View of Copyright* (Columbia University Press, 1967), at 5, Hereafter: [Kaplan, 1967]

[46] Table 1, Bills relating to the book trade 1695-1794, in John Feather, *The Book Trade in Politics: The Making of the Copyright Act of 1710*, 8 Publishing History 1980, at 22, Hereafter: [Feather, 1980]

[47] Commons Journal IX, at 289.

[48] Lords Journal XV, at 545-46 (18 April 1695).

property rights, should not have been granted. They argued the injustice of fettering unduly the freedom of individual authors, and on the harm done to learning. Also, there were more practical reasons such as the difficulties of administration in a licensing system, as well as restraints on the trade. Also, the gradual settlement under a two party system at Parliament, prevented the Houses to come to agreement.[49] The Whigs were opposed to any powers given to the crown which could interfere to a large extent with individual liberty.[50] In the meantime the stationers, printers, and binders continued to petition for relief.[51] The absence of any petition for protection on the part of authors and translators should be pointed out. It was in line with the general state of docility authors had been put in.

### THE MODERN LAW OF COPYRIGHT

Pre-publication censorship in England came to an end in 1694 when the House of Commons refused to renew the 1662 Printing Act.[52] With it the only legal basis for copyright protection lapsed, consequently leaving the Company without any legal means to protect its stocks. As Lord Camden remarked, the Stationers,

> "[...] came up to Parliament in the form of petitioners, with tears in their eyes, hopeless and forlorn; they brought with them their wifes and children to excite compassion, and induce Parliament to grant them a statutory security."[53]

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[49] [Holdsworth, 1937], Vol. 6, at 375; [Siebert, 1952], at 260-63.

[50] In the aftermath of the Revolution, the majority of Whigs had no desire to change society on the basis of such radical notions as the contract theory of Locke, the natural rights of man and the sovereignty of the people. They wanted to restore the powers of the crown, the privileges of Parliament and strengthen the civil liberties of the people. However, they remain more liberal than the Tories on certain issues such as the control of the press or the control exercised by the crown, H.T. Dickinson, *Liberty and Property* (London, 1977), at 44-45, 58-59, 80.

[51] Common Journal, XV, 313 (26 Feb. 1707)

[52] Raymond Astbery, *The Renewal of the Licensing Act in 1693 and Its Lapse in 1695*, 33 The Library 1978, at 296-322.

[53] *Donaldson v. Becket* (House of Lords, 1774), see 17 Parliamentary History of England 1813, at 995.

As a matter of fact, no less than ten Bills were introduced to Parliament and failed to pass until the Copyright Act of 1710.[54] The Bills which were introduced aimed at controlling newspapers rather than the trade as a whole. As Queen Anne moved towards a childless grave, the Whigs and the Tories were fighting about the succession and its implications within the kingdom.[55] Each party was afraid to trust the other with the administration of a new licensing act. Parliament wanted to keep a firm grip on newspapers. News of any kind was regarded as a state secret and its distribution as a monopoly. Therefore, with the lapse of the Act Parliament sought in different ways means of controlling the Press. Nonetheless, the debate was not only political but also philosophical. Issues were raised concerning freedom of expression and disputes over ownership of printed materials.

Daniel Defoe wrote a pamphlet in order to gain attention for what he called "the Propriety of the Work".[56] His position has been established as that of a moderate Tory on press regulation.[57] He wished to set up some form of restraint on licentiousness but not on knowledge. Furthermore, Defoe wanted to:

> "put a Stop to certain sort of Thieving which is now in full practice in *England*, and which no laws extends to punish, viz. some Printers and Booksellers printing Copies none of their own".[58]

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[54] [Feather, 1980], at 20-30.

[55] H.T. Dickinson, *Liberty and Property* (London, 1977), at 39.

[56] "To restrain the Licentious Extravagance of Authors therefore, and bring the Press under Regulation, is the Case before us and this is for that Reason call'd, *An Essay on the Regulation of the Press.*", Daniel Defoe, *An Essay on the Regulation of the Press*, (7 January 1704), Classics of English Legal History in the Modern Era (London, 1978), at 21, Hereafter: [Defoe, 1704]

[57] [Feather, 1980], at 29; "Licentiousness of all sorts ought to be Restrain'd, whether of the Tongue, the Pen, the Press, or any thing else, and it were well if all sorts of Licentiousness were as easy to Govern as this; but to Regulate this Evil by an Evil ten times more pernicious, is doing us no service at all", [Defoe, 1704], at 11.

[58] *ibid*, at 19.

The question of literary property regained some interest. Defoe argued that practices which rob authors of their property have the effect of discouraging the publication of learned and useful works. Consequently, authors need to be protected in order to prosecute people publishing pirated works, or any abridgement.[59] Nonetheless, he subordinated the protection of copies to the regulation of the press. The terms are not new as regards the development of intellectual property in Europe. Defoe found grounds for his argument from the well-known justification whereby grants of monopoly rights to inventors increase national welfare and induce further inventive efforts. Therefore, the state has a duty to intervene, all the more so since the state's own interests are at stake. Interestingly, Defoe, in raising the point that authors ought to be protected, argued that they should be able to act on piracies. He concluded:

> "The Law we are upon, effectually suppresses this most villainous Practice, for every Author being oblig'd to set his Name to the Book he writes, has, by this Law, an undoubted exclusive Right to the Property of it. The Clause in the Law is a Patent to the Author, and settles the Propriety of the Work wholly in himself, or in such to whom he shall assign it; and 'tis reasonable it should be so."[60]

His line of thinking, it seems to me, advocates nothing more than the continental, and especially the Venetian philosophy of copyright, whereby authors having economic interests in their works have an exclusive right to the property of them. Nevertheless in Britain, Defoe's argument paved the way for a new concept of copyright.

On 11 January 1710 a new ministerial Bill was introduced for first reading.[61] The book-trade immediately went into action. Several petitions were sent to

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[59] "Authors would be known as soon as the Book, because this Law would oblige the Printer or Bookseller to place the Author's Name in the Title, or himself", "I think in Justice, no Man has a Right to make any Abridgement of a Book, but the Proprietor of the Book; and I am sure no Man can be so well qualified for the doing it, as the Author, if alive, because no Man can be capable of knowing the true Sense of the Design, or of giving ot a due him that compos'd it", [Defoe, 1704],at 18 & 20.

[60] *ibid*, at 21.

[61] Commons Jounal XV, at 313.

Parliament with recurrent and identical arguments, although with important variations of emphasis.[62] Petitions were presented by all the leading members of the trade, copy-owners, booksellers and apprentices, who had tried over ten years to protect their separate interests. The trade started emphasising Defoe's arguments that literary protection should be beneficial to authors as well as to the book-trade as a whole. Two main themes were advocated: a "Bill for Encouraging Learning" and "for Securing copies of books to the rightful owners".[63] In doing so they intended to give pre-eminence to the protection of authors without undermining their own position, in other words, to protect their former patents in classes of books. Professor Benjamin Kaplan, in his famous James Carpentier Lecture in 1966, observed with much truth:

> "There is an apparent tracing of rights to an ultimate source in the fact of authorship, but before attaching large importance to this we have to note that if printing as a trade was not to be put back into the hands of a few as a subject of monopoly - if the statute was indeed to be a kind of "universal patent"- a draftsman would naturally be led to express himself in terms of rights in books and hence its initial rights in authors. [...] I think it nearer to say that publishers saw the tactical advantage of putting forward authors' interests together with their own, and this tactic produced some effect on the tone of the statute".[64]

For instance, among the various minor amendments accepted, two significant ones reveal the true intent. In the original draft, the Bill placed a far greater emphasis on authors' rights. Books were authors' "undoubted Property" which concerned "all civilized Nations" where an author could "reserve to himself" some or all the rights attributed by the bill.[65] In the final draft of the Bill such generous terms vanished. The trade could not afford to give away such wide generous rights to authors. Its wealth

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[62] [Feather, 1980], at 34.

[63] "The Booksellers' Humble address to the honourable House of Commons, in behalf of the Bill for Encouraging Learning" (11 January 1710), Bodleian Library, John Johnson Collection, cited in [Feather, 1980], at 34.

[64] [Kaplan, 1967], at 8.

[65] Commons Journal XVI, Preamble and third paragraph, at 260-61 & 339.

depended entirely upon the securement of its exclusive ownership on copies. Also, one petition established clearly the matter as *The case of the booksellers' rights to their copies, or sole power of printing their respective books.*[66] Furthermore, it may be argued that the distinction established in the Act between old and new books was intended to impose some "ingredient of fresh authorship and not to be merely a reissue" in order to protect old entries of the Company's Register against competition.[67]

The 1710 Copyright Act attempted to solve three issues: the question of imported books, the question of piracy, and the question of copyright.[68] The Act created a new kind of property, formerly unknown to English law: literary property. The Act was the first statute in Britain to recognise the legal existence of an exclusive right to print a manuscript, for a determined period of time, and where the original copy is a piece of property which *ipso facto* has an owner.[69] I wish to focus attention on the similarity which can be drawn between the Venetian law of copyright and Queen Anne's Act. The Republic of Venice had already regulated copyright along these lines by a special law in 1517 which confirmed the new patent system, and especially copyrights, so that grants of privileges in a book provided an exclusive right limited to newly printed and not newly written works. Copyright was based upon the economic merit of the work and not on censorship features. Furthermore, in 1545 consent of authors was required in order for anyone to secure copyright. Both acts

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[66] British Library, 1883.b.58(3.), cited in [Feather, 1980], at 35.
[67] [Kaplan, 1967], at 9.
[68] 8 Anne c.21
[69] John Feather, *The English Book Trade and the Law 1695-1799*, 12 Publishing History 1982, at 56 & 67, Hereafter: [Feather, 1982]

reflected the concern of European states in balancing public and private interests. As such, problems of interpretation emerged from Queen Anne's Act due to its relative vagueness and new approach towards the dissemination of information. It should also be stressed that the traditional practices of the trade had a major influence on its first application. During the eighteenth century, the Act would be challenged and a precise interpretation of its content would be given to establish "the foundation of copyright as we know it. It established the author's right to his own property".[70] It is then of importance to understand what this Act truly means.

The preamble explains in detail the need for a statute. Unauthorised copies were ruining the business of established printers, so a statutory protection was required "For Preventing therefore such Practices for the Future". A restricted copyright monopoly was, however, created "for the Encouragement of Learned Men to Compose and Write useful Books". The focus of the Act shifted from the printer to the author, although it was not unambiguous. As the creator and originator of works, the author became the source of the right of copy. The copyright was then the reward for his creative contribution to society. Therefore, the intended results of such protection would benefit the author as well as the public. Thereafter, the provisions of the Act fall into three parts. First, from April 10, 1710, all existing books were copyrighted to their present owner for twenty-one years, while all new books were protected for fourteen years from the date of publication with the possibility of a second fourteen-year term if the author was still alive. All books had to be recorded in the "Register-Book of the Company of Stationers" in order to claim protection or

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[70] Victor Bonham-Carter, *Authors by Profession*, Vol. 1 (London, 1978), at 16.

ownership under the Act. Penalties were prescribed for any breaches of the law. Second, from March 25, 1710, a price control on books was established and anyone might complain about "High or Unreasonable" prices.[71] And third, after April 10, 1710, one copy of every new book had to be deposited in the nine copyright depository libraries. Penalties were prescribed here too.

The limited duration of protection introduced for the first time in England the concept of public domain, since no more protection could be sought. It could be argued, however, that the book-trade recognised implicitly that protection at common law was insufficiently protective as the preamble of the Act mentions that without copyright the trade would be at its "Detriment" and "Ruin". Another vital issue was limited copyright protection. Booksellers strarted pressing claims that copyright was perpetual. With the printing monopolies a copyright was clearly a piece of property whose owner had total control but was subject to temporal limitation. The book trade claimed that such temporality could not exist in law, and that, while there was a temporal limitation on specific statutory penalties for infringements of the property, there could be no such limitations on the property itself. Stationers acted as if they believed in the existence of perpetual copyright. The confusion over the term of copyright was helped by the long time unchallenged practice of the Company to consider exclusive royal grants or privileges to print as proof of ownership, which implied that all acts of printing were the prerogative of the king, and that the crown transferred its perpetual ownership of printed publications. Also, nothing was said on the Act about what happened to copies after losing their term of protection. Was the

[71] This clause was repealed in 1739, 12 George II, c. 36.

copy in public domain? However, some booksellers pressed a claim that copyrights were perpetual in common law.

The Act was no more than a statutory recognition of the economic rights of the author where books could be registered in the Stationers' Company Register. Problems of interpretation arose concerning the ownership of entries. The trade did not interpret the Act this way at all. Authors were recognised as the source of the right, but it was vested into the hands of the stationers ultimately. Booksellers raised the spectre of common law copyrights which was to be solved finally in 1774. They claimed that under common law any man who purchases a property enjoys it for ever, whether the property is an estate or a copyright. In 1695, the concept of ownership of copies existed in law only as part of the general ownership of real property, and the idea of intellectual property was unknown to English law.[72] Confusion was legitimate since patents provided the model for the exclusive right to print and the licensing register the evidence for ownership. Nonetheless, all rules developed in the period preceding the Act evolved from the orders and decisions of the Court of Assistants of the Company.[73] Also, far from helping, the Act did not define literary property as such. The Act may have encouraged learning, but it is impossible to quantify such an affirmation. It certainly introduced a new way of protection and of looking at intellectual creations, allowing the establishment of a statute based on a recognition of

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[72] Patents and copyrights came to be classed as choses in action. The conception of a chose in action was extended from a right to bring an action to the documents which were the necessary evidence of such right. Patents or printing privileges depended upon royal grant and analogy to the franchise was made, [Holdsworth, 1937], Vol. 7, at 528-30.

[73] Cyprian Bladgden, *The Stationers' Company. A History 1403-1959* (London, 1960), at 45

economic rights of an author in his creations. The statute could be seen as a basis for civil suits in defence of certain property with penalties attached.

In practice the trade interpreted the new Act literally. A copy entered in the Register was the property of the entrant. Anyone who would print without the permission of the owner was breaking the law. Since no definition of "literary property" was provided and the Act said nothing about what happen at the end of the terms of protection, it needed some clarification from the courts. The Court of Chancery simply continued to apply the common law of property to such cases reinforced by the statute's provisions in the light of the traditional trade practices.[74] However, only a few stationers claimed such remedies. The usual practice was for the copy-owner to seek an injunction to prevent the printing or publication of pirated copies. Therefore, it was the literary property of the publishers and not of the authors that the Act was protecting according to the trade.

Once the protection of the pre-1710 copyrighted books ended in 1731-32, problems of ownership appeared. Copy-owners asked instantaneously for a new Act. Parliament found instead that the problem was the import of English language piracies, notably from Ireland. In 1739 Parliament passed an Act to forbid import of such books. The end of the first set of 28 years of copyright protection arrived in 1738. The book trade in Scotland had been growing significantly, since the North of England was not well supplied in books by the London publishers. As a result, the Scottish as well as the Irish publishers found an open market in the North. The trade of pirated books simply met the demand. Since the 1707 Act of Union, Scotland was

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[74] John Feather, *The Publishers and the Pirates. British Copyright Law and Practice 1710-1775*, 22 Publishing History 1987, at 6, Hereafter: [Feather, 1987]

not legally considered as importing English language books unlike Ireland which would not be in the Union until the Act of 1800. In practice, it was difficult for the English printers to inhibit the trade of pirated books. Suits were brought in Scottish and English courts on the expired copyrights.

### CHALLENGING THE ACT

Stationers had protected copyright-privileges in such a way that they had come to be in substance a right of property. With the last printing acts sufficient powers were given to them to protect their ownership in stocks and challenge infringers.[75] Moreover, since ownership of works had depended for so long upon patent-privileges and had been protected by the penalties provided in subsequent licensing acts, the withdrawal of these privileges and the abolition of these penalties left the legal position very obscure. Stationers argued that copyright existed at common law. Nevertheless, their right was based not only upon the licensing Acts, and their remedies, but also originated from royal patents giving exclusive rights to print and copyright-privileges gained by registration. In effect, copyrights were protected solely by the Court of Assistants or prerogative courts, the Star Chamber or the Privy Council. Plaintiffs for infringement had recourse to these remedies and not to common law ones. In fact a copyright-privilege was, I venture to say, not believed by stationers to be so much a right of property recognised at common law but simply a monopolistic right depending upon royal grants and exercised by officers of the Company to prevent piracies and preserve their family-settlements. In effect this

[75] 14 Charles II. c.33 Par. 5, recognises that copyright is gained either by virtue of royal patent or by registration with the Stationers' Company.

instrumentalist perception of copyright influenced subsequent interpretations of the Copyright Act until the House of Lords rejected it in 1774.

The fundamental question was whether copyright as a form of literary ownership existed before the 1710 Copyright Act and how it was protected. First the use of the terms "common law" and "copyright" should be clarified. On the one hand, the term "common law copyright" refers to a right at common law that would grant the artist or creator the exclusive right to make, distribute and sell copies of his work, regardless of any statutory protection.[76] Therefore, protection is afforded to creators during the period of creation and after creation but before the economic exploitation of the work.[77] It is sometime called the right of first publication. Consequently, the act of publication would terminate the common law copyright for authors. According to printers and booksellers, no such right existed; on the contrary common law copyright was a perpetual property right. On the other hand, the expression "the common law of copyright" is a right established by decisional law or statute and vested in authors, preventing any unauthorised publication of unpublished work.[78] Once the work has been published it loses its protection and passes in to the public domain unless it receives a statutory protection for a limited period of time. Therefore, copyright protection comes to protect what has been publicly disclosed. As a result, the question which was put with much clarity by Professor Kaplan is:

> "Did the copyright in published works cease at the expiration of the limited periods specified in the statute, or was there a non-statutory, common-law copyright of

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[76] Howard B. Abrams, *The Historic Foundation of American Copyright Law: Exploding the Myth of Common Law Copyright*, 29 Wayne Law Review 1983, at 1130, Hereafter: [Abrams, 1983]

[77] James M. Treece, *American Law Analogues of the Author's "Moral Right"*, 16 The American Journal of Comparative Law 1968, at 488.

[78] [Abrams, 1983], at 1130.

> perpetual duration, with the statute merely furnishing accumulative special remedies during the limited periods?"[79]

This traditional formulation refers to the nature and philosophy of the copyright system as it had been defended by the trade. Nonetheless, this question tends to look at the act solely in the light of the instrumentalist perception. This brings us to another question of whether the Act directly recognised authors as the source of literary property, as a property rather than a statutory privilege.

"The great question on literary property" is of theoretical and practical significance.[80] Arguments viewing copyright as a common law right uphold the author's rights and look at the users as having limited access to the private property of the author. On the other hand, arguments viewing copyright as a statutory protection support a limited copyright monopoly for the author, ensuring access to the public of literary work. It should be stressed that in the interval between the expiration of the Licensing Act of 1679 and its revival by the 1685 Act, the case *Ponder v. Bradyl* had already presented the issue of common law property.[81] Nathaniel Ponder had entered first on the Book-Register John Bunyan's book *The Pilgrim's Progress* on 22 December 1677, and it had been licensed by Roger L'Estrange on 18 February 1678. With the expiration of the Licensing Act, Ponder lost his statutory protection and brought an action on the case. Unfortunately the case was aborted, although it would had been a test for the theory of common copyright law.[82] The issue was finally raised

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[79] [Kaplan, 1967], at 12.

[80] *Donaldson v. Becket* (H.L. 1774), 17 Parliament History of England at 953

[81] Harrisson, *Nathaniel Ponder: The Publisher of the Pilgrims Progress*, 15 The Library 1934, at 257.

[82] "an action on the case brought for printing the Pilgrims' Progress; of which the plaintiff was and is the true proprietor; whereby he lost the profit and benefit of his copy. But I don't find, that this action was ever proceeded in.", Justice Willes's opinion refering to *Ponder v. Raddyl* in *Millar v. Taylor*, 4 Burr. at 2317, 98 Eng. Rep. at 209 (K.B. 1769).

when the first terms of copyright for old books expired in 1731. It should be noticed that, curiously, the following cases were to be inconclusive. In *Tonson v. Walker* the plaintiff sought an injunction restraining the defendant from publishing an edition of John Milton's poems which were first published before the Statute of Anne in 1710, on the grounds that the statutory protection of twenty-one years had expired.[83] Lord Mansfield stated during the hearing on the injunction that:

> "[i]f this case comes to be heard, I shall be inclined to send a case to the judges, that the point of law [common law copyright] may finally be settled, for I do not know that it has been judicially determined".[84]

Another case, *Tonson v. Collins*, involving new books, tried to establish a precedent affirming the existence of common law copyright.[85] Incidentally, the judges suspected that the action was brought by collusion. Finding some clear evidence "that the whole was a collusion, and that the defendant was nominally only, and the whole expense paid by the plaintiff", they refused to proceed any further with the case.[86] Not all the cases were inconclusive. In July 1765, two cases involving the Scottish bookseller Alexander Donaldson raised the question whether there was any basis for the exclusive right to print a work other than the parliamentary statute. In *Osborne v. Donaldson* and *Millar v. Donaldson* the plaintiffs obtained injunctions prohibiting Donaldson from "printing and vending certain publications".[87] The latter argued that the term of protection had expired, so such copies were not protected by statute. The Lord Chancellor dissolved the injunctions, however, stating that "it was a new

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[83] *Tonson v. Walker*, referred to at 4 Burr. 2325, 98 Eng. Rep. 213 (Ch. 1739); *Tonson v. Walker*, 3 Swans. 672, 36 Eng. Rep. 1017 (Ch. 1752)

[84] *Tonson v. Walker*, 3 Swans. 671, 36 Eng. Rep. 1019 (Ch. 1752).

[85] *Tonson v. Collins*, 1 Black. W. 301, 96 Eng. Rep. 169 (K.B. 1761)

[86] Justice Willes in *Millar v. Taylor*, 4 Burr. at 2303, 98 Eng. Rep. 201 (K.B. 1769)

[87] *Osborne v. Donaldson*, 2 Eden at 328, 28 Eng. Rep. 924 (1765).

question" and "that it was a point of so much difficulty and consequence, that he should not determine it at the hearing, but should send it to law for the opinion of the judges".[88] The legal situation of published manuscripts was only to be settled in 1774 by the House of Lords.

As opposed to the question of literary property in published books, the question of literary property in unpublished manuscripts was recognised with no difficulty in common law courts. In 1741, the defendant was enjoined in *Pope v. Curl* from publishing a book containing unpublished letters written by the plaintiff. The ruling established that the recipient of letters owned only the paper on which the letter was written, but not the right to publish the letters.[89] In July 1758, the defendant was forbidden in *Duke of Queensberry v. Shebbeare* from printing a previously unpublished manuscript of the Earl of Clarendon's "History of the Reign of Charles the Second to the year 1667". The Lord Keeper held that giving a copy of an unpublished manuscript to another did not create a presumption that the recipient had a right to print and publish the manuscript.[90] Moreover, in *Macklin v. Richardson* the defendant was enjoined from printing the plaintiff's play *Love A-la-mode* when the court held that the public performance of the play did not constitute publication.[91] Courts recognised clearly that authors had perpetual property in an unpublished work independent of the statute. The decisions in effect corroborated the statutory provision in published books. Unpublished manuscripts were to be protected by common law

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[88] Ibid.
[89] *Popes v. Curl*, 2 Atk. at 342, 26 Eng. Rep. 608 (Ch. 1741).
[90] *Duke of Queensberry v. Shebbeare*, 2 Eden. at 329, 28 Eng. Rep. 925 (Ch. 1758).
[91] *Macklin v. Richardson*, 27 Eng. Rep. 451 (Ch. 1770).

copyright and not by statutory copyright. In 1769 Justice Yates in *Millar v. Taylor* reasserted:

> "It was therefore alleged, "that a literary composition is certainly in the sole dominion of the author, till he thinks proper to publish it:" for, no man can lawfully take it from him to publish against his will."[92]

Moreover, he added that the theory of first publication was the starting point of statutory protection.[93] Nonetheless, this idea of common law property vested in authors is interpreted solely as a mere right of action, "a right of bringing an action against those that print the author's work without his consent."[94] Important considerations were to be drawn from this line of thinking in the case of *Millar v. Taylor*.

Another important step towards the recognition of literary property in authors was the a gradual erosion of the supremacy of the royal patents. The courts and Parliament became concerned with finding a special interest in the Crown to justify the royal prerogatives. Here, I am concerned with prerogative property which stands on different principles from that of authors. In theory, royal prerogatives were not assigned by the monarch himself but by the kingly office.[95] The king embodies a corporation which is said never to die. Therefore, the king could own property in his politic capacity separately from his private capacity. Following this reasoning, the sole right of printing and of what are called prerogative-copies was to be challenged in courts and by Parliament. It was then established that the king has no property in the art of printing.[96] On the one hand, the right of the crown to print is founded on

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[92] Justice Yates in *Millar v. Taylor*, 4 Burr. at 2356, 98 Eng. Rep. 230 (K.B. 1769)
[93] *ibid*, at 242-43
[94] *ibid*, at 245
[95] [Holdsworth, 1937], Vol. 9, at 4.
[96] *Basket v. The University of Cambridge*, 1 Black W. 106-122, 96 Eng. Rep 59-67 (K.B. 1758).

religious and stately reasons. Accordingly, in the cases which had been determined in favour of the royal patentees, the courts went upon the letters patent. In 1666, for instance, the House of Lords in the Atkins case affirmed a decree in Chancery prohibiting all members of the Company of Stationers from printing law books without Colonel Atkins authorisation in the right of his wife, daughter of John More who was granted by James I with the exclusive right to print law books.[97] Similarly, prerogatives in printing psalms, psalters, almanacs were attributed to the crown since the king has ecclesiastical jurisdiction.[98] As for law books, it was argued, and rationalised by proponents of common law copyright, that the king paying the salaries of judges had a special interest in the reporting of law.[99] Also, it was of concern for the crown to preserve good understanding between king and people. It should be clear that the king had no private interests or private property in prerogative-copies. For instance, the king himself do not pay salaries personally but rather the crown itself does, as a public charge. On the other hand, there are cases which relegate claims of copyright made by printers based on the purchase from an author of copies which have a lesser status than a letters patent. The fundamental issue is whether literary property is to be a right recognised in an author by common law as a natural right flowing from the act of creation, labour or composition or any other circumstances attending the case of authors or established by statute. In *Roper v. Streater*, for instance, the plaintiff had purchased the third part of Justice Crook's reports from

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[97] *The Stationers v. the Patentees about the Printing of Roll's Abridgment*, Cart. 89, 124 Eng. Rep. 842 (H.L. 1666)

[98] *The Company of Stationers v. Lee and Others*, 2 Shower at 258, *The Stationers Company v. Partridge* and *The Stationers Company v. Seymour.*

[99] *The Stationers v. The Patentees about the Printing of Rolls' Abridgment*, Carter 91, 124 Eng. Rep. 843, alluded to by Justice Willes, in *Millar v. Taylor*, 4 Burr. at 2316, 98 Eng. Rep. 208 (K.B. 1769).

Crook's executor, which Streater published under the authority of a royal patent for the printing of law books.[100] Roper brought an action of debt upon the Licensing Act. The court adjucated for the plaintiff but was later on reversed in Parliament. Despite the reversal, it seems to me that the fact that Roper purchased the copy from the author's executor shows that even judges were recognised some sort property in their work. Added to that, the reversal was argued upon the opinion that laws pronounced by judges are king's laws. However, I venture to say that it is questionable that the crown had any interest in Justice Crook's reports even if it paid his salaries. In my opinion, the gradual erosion of the force of royal patents was a questioning of the role of the Crown in English law rather than a rising theory of author's right. Recognition of literary property vested in authors was to be established only after the conclusion of the case *Donaldson v. Becket* in 1774. Incidentally, the force of the royal patents seemed to have disappeared to almost a point of non-existence after the Lords' decision.

### THE QUESTION OF LITERARY PROPERTY

The question concerning literary property received its first determination in *Millar v. Taylor* in 1769.[101] Andrew Millar brought a case over the epic poem, *The Seasons*, by James Thomson, from whom Millar bought the rights in 1729. The statutory protection ended in 1758, and Robert Taylor produced some reprints of the poem in May 1763. The plaintiff advocated that there was a common law property right vested

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[100] Case unreported but it is discussed in The Stationers v. Patentees about the Printing of Roll's Abridgment, Carter at 89, 90 Eng. Rep. 842 (Common Pleas 1666) and *Company Stationers v. Parker*, Skin. 233-234, 90 Eng. Rep. 107-08 (K.B. 1685)

[101] *Millar v. Taylor*, 4 Burr. at 2303-2416, 98 Eng. Rep. 201-266 (K.B. 1769)

in authors "independent of and not taken away from the statute" of Anne in order to preempt Taylor from publishing the poem.[102] Counsel for the defendant claimed on the contrary that no right remained in authors at common law. The opinions stated in this case marked a fundamental transition in legal thought in analysing an author's title to a copy. Accordingly, the judges covered the topic extensively. Justice Willes presented the issues as follows:

> " 1st. Whether the copy of a book, or literary composition, belongs to the author, by the common law :
> 2d. Whether the common law-right of authors to the copies of their own works is taken away by 8 Ann. c. 19."[103]

In answering the question, the court held that the owner of the copyright could sue an infringer because common law recognised a perpetual copyright notwithstanding the expiration of the statutory copyright term. It was the first time that a court had confirmed the book-trade's perpetual right interpretation of copyright.

The Lord Chief Justice, Lord Mansfield, arguing in favour of the result and the source of common law copyright in unpublished manuscripts, declared:

> "[...] - because it is just, that an author should reap the pecuniary profits of his own ingenuity and labour. It is just, that another should not use his name, without his consent. It is fit, that he should judge when to publish, or whether he ever will publish. It is fit, he should not only choose the time, but the manner of publication; how many; what volume; what print. It is fit, he should choose to whose care he will trust the accuracy and correctness of the impression ; in whose honesty he will confide, not to foist in additions : with other reasonings of the same effect."[104]

His argumentation, as well as other Justices', reflects the instrumentalist views of the book trade whereby authors are suppliers of works to printers who in turn take immediate control of the work. It is well worth noting the choosing of the words which reflects printers' concerns. In choosing the time, the manner of publication, the

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[102] *ibid*, at 203
[103] *ibid*, at 206
[104] Lord Mansfield, *ibid*, at 252

number of copies, how many volumes, and deciding what to print, it seems to be more printers than authors who are making decisions. Furthermore, emphasis is given to printers who will not "foist in additions: with other reasonings of the same effect", which could insinuate that authors are only a source of rights which ought to be perpetual for the printers' interests.[105] In other words, authors' rights are reduced to printing and selling, the ones which characterised the business of printing and selling books. Lord Mansfield concluded, then, that once published, the Act was no answer to authors' problems in reaping pecuniary profit from their work. As a result, "it is agreeable to natural principles, moral justice and fitness, to allow [the author] the copy, after publication, as well as before."[106] Furthermore, Justice Willes, in an attempt to undermine the negative effects of such perpetual monopoly, argued the public benefits brought by monopolies. He observed "that the plaintiff always had a sufficient number of these books exposed to sale, at a reasonable price" and that the common law copyright could not prohibit "bonâ fide imitations, translations, and abridgements".[107] Therefore, by advancing the rights of the author as their justification, the book-trade found an appealing disguise which drew attention away from their monopoly claims. Clearly, this concept of common law copyright weakens the scope of author's right. In other words, the trade analysed copyright protection as it was practised before the Statute of Anne. If an author was to be published, the

105 [Abrams, 1983], at 1154.
106 *Millar v. Taylor*, 4 Burr. at 2399, 98 Eng. Rep. 253 (K.B. 1769).
107 *ibid*, at 205

copyright was almost inevitably to pass into the hands of the stationers without the least regard to authors and compositions, and even sacrificed the public domain.[108]

The judges analysed the Act as a measure designed to provide a temporary set of additional quasi-criminal remedies in support of common law rights. In other words, the adoption of statutory remedies was, in my opinion, turned into a recognition of the inadequacy of remedies of a supposed common law copyright. Justice Aston made the remark:

> "This Act was brought in at the solicitation of authors, booksellers and printers, but principally of the two latter ; not from any doubt or distrust of a just and legal property in the works or copy-right, [...] but upon the common-law remedy being inadequate, and the proofs difficult, to ascertain the damage really suffered by the injurious multiplication of the copies of those books which they had bought and published"[109]

As a matter of fact, the trade was facing a difficult situation. Pirated books from Ireland and Scotland were sold in England, and legal remedies at common law seemed to be non-existent.[110] Lord Mansfield argued that since the king had no authority in restraining the press, the prerogatives of the crown on printing rested "upon the foundation of property in the copy in common law".[111] Similarly an author ought to have perpetual property in his copy at common law. Consequently, the Act independent from common law copyright gave additional security to a proprietor. This interpretation by the majority of justices can be questioned on the ground that it seems

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[108] "The lack of personal and literary status in the community at large was manifested in a more concrete way in the organisation of the mid-century press. The need for substantial backing and the intervention of the booksellers and politicians pushed the 'author', in whatever capacity, into a clearly subordinate position", Michael Harris, *Journalism as a Pofession or Trade in the Eighteenth Century*, Publishing Pathways Series, in *Author/Publisher Relations During the Eighteenth and Nineteenth Centuries* (Oxford Polytechnic Press, 1983), at 57.

[109] *Millar v. Taylor*, 4 Burr. at 2350, 98 Eng. Rep. 227 (K.B. 1769); see also Lord Mansfield, *ibid*, at 256

[110] Before 1710, the normal practice was for the copy-owner to seek an injunction to prevent the pirate from printing or publishing the work in question, see John [Feather, 1987], at 6.

[111] *Millar v. Taylor*, 4 Burr. at 2405, 98 Eng. Rep. at 256 (K.B. 1769)

doubtful that Parliament had adopted an Act solely as a temporary measure to support a perpetual common copyright which had not been affirmed by any court. Accordingly, Justice Yates dissented from that majority. He resisted the notion that property in books existed before the 1710 Copyright Act, springing from the act of creation. It seemed doubtful to him that Parliament would have provided temporary protection to support a possible recognised, perpetual common law right. He added also that "if authors derive their right from common law, [...], the author's right will be the same, whether it enters it in that [register] book, or not."[112] Unfortunately that issue was not explored. Justice Yates agreed on the perpetual nature of copyright of authors, or their assignees, but rejected its embodiment at common law. He formulated the issue as:

> "whether, after a voluntary and general publication of an author's work by himself, or by his authority, the author has a sole and perpetual property in that work ; so as to give him a right to confine every subsequent publication to himself and his assigns for ever".[113]

This formulation of the issue gave it a different focus.

Yates agreed that literary composition belongs to the author and that no man can lawfully take it from him or compel him to publish against his will. Creation and labour are the means of acquiring property, and literary compositions are the objects of the author's sole right of possession until he publishes. From the act of publication, literary compositions are no longer an exclusive private right. Authors acquire property from their labour and literary compositions are the fruits of this labour. Moreover, the composition of the book is capable of the sole right of possession but

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112 *ibid*, at 231
113 *ibid*, at 229

not ideas, because "[p]roperty is founded upon occupancy."[114] Again, his dissenting opinion formulates intellectual property upon instrumentalist contentions. From this line of thinking, common law copyright is argued in terms of a property right *in personam* which stems from the act of creation, result of the author's creative process. As a result literary property starts from the act of publication as a right *in rem* rather than from the act of creation. Yates pointed out that the statute of Queen Anne fixed adequately the commencement of the author's corporeal right from the time of publication when first entered in the Register, notwithstanding that authors derive their incorporeal right at common law whether or not they enter their work. As a result, every man is entitled to the fruit of his own labour,

> "he can only be entitled to this according to the fixed constitution of things, and subject to the general rights of mankind, and the general rules of property. He must not expect that these fruits shall be eternal ; that he is to monopolize them to eternity [...]. In that case, the injustice would lie on the side of the monopolist, who would thus exclude all the rest of mankind from enjoying their natural and social rights."[115]

Accordingly, statutory provisions fixed the extent of the author's exclusive economic property to twenty-eight years maximum from publication, while the manuscript still remained the author's personal property. Yates observed that authors are not victims of an injustice, since it would be an injustice to establish a perpetual monopoly which implies limitations on public access to works by publishing, printing or using it. Therefore, the initial focus was on the act of creation and on what ought to be the legal consequences of the act. In other words, what the trade was aiming for was a tort right and not a property right reinforced by statutory provisions independent of

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[114] *ibid*, at 230
[115] *ibid*, at 231-32

perpetual common law copyright. The second focus concerned the impact of perpetual protection on the users prevented from having access to ideas.

What I am concerned with here is the basis of the rationale of copyright protection in common law tradition countries. Proponents of broad common law rights stress the act of creation as the proper starting point for analysis. Advocates for restricted or pre-empted common law rights look first at the impact of the alleged copyright on the public. Likewise, concerns shift from the trade to authors and the public interests as a whole. Even Lord Mansfield recognised this move implicitly:

> "The accurate and elaborate investigation of the matter, in this cause, and in the former case of *Tompson and Collins*, has confirmed me in what I always inclined to think, "that the Court of Chancery did right, in giving relief upon the foundation of a legal property in authors ; independent of the entry, the term for years, and all other provisions annexed to the security given by the Act." "[116]

As opposed to Lord Chancellor Northington, in the case *Osborne v. Donaldson*, he did not send the question for opinion to the judges but instead decided in favour of the plaintiff. Incidentally, Taylor appealed to the Lords but curiously decided to terminate it. On the circumstances of the trial itself, an anonymous editor commented that Millar first dropped a suit against Donaldson,[117] "but began another for the same book with Taylor, as he no doubt thought him a fitter person to be dealt with in case at any time compromise should be useful". As regards the dropping of the appeal he concluded:

> "[Taylor] at first took out a writ of error against the determination of King's Bench, but was afterwards prevailed with to compromise matters with the Booksellers: the reason is obvious, they wanted that no chance should be given for a reversal of this judgement ; and their arguments with Taylor were so powerful (although a certain person had offered to be at one half of the expense) that he withdrew his appeal".[118]

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[116] *ibid*, at 257

[117] Richard S. Tompson, *Scottish Judges and the Birth of British Copyright*, Juridical Review 1992, at 26, Hereafter: [Tompson, 1992]

[118] *Speeches Arguments of the Judges of the Court of King's Bench ... in the Cause Millar against Taylor*, Leith 1771, from an anonymous Scottish publisher cited in [Tompson, 1992], at 27.

Richard Tompson reports a supposition that Taylor got an annual pension from that day. Would it be possible to draw a parallel with *Osborne v. Donaldson*? Such circumstantial evidence coupled with the evident desperate attitude of the trade could make a compromise plausible. Moreover, the collusion in *Tonson v. Collins* makes me wonder about the impartiality of the case *Millar v. Taylor*. Nevertheless, the booksellers seemed to be in a commanding position. Five years later, however, the decision was overruled by the decisive case *Alexander Donaldson v. Becket and Others*.

As for the story of the case, Alexander Donaldson was already well known for his campaign against his London rivals in business and their monopoly.[119] Bookseller in Edinburgh, he opened his first bookshop in 1750, edited the *Scots Magazine* and launched the *Edinburgh Advertiser* in 1764.[120] In effect, he was the perfect target for legal action from the London booksellers since he was making a flourishing business by publishing cheap reprints of books. In 1771 Donaldson had two legal actions brought concurrently against him. The first one was brought in Edinburgh by a London bookseller, John Hinton, for the publication and sale of Thomas Stackhouse's *New History of the Holy Bible*.[121] The second action was brought in London by Thomas Becket the new copy-owner of Thomson's *The Seasons*. Becket obtained from Chancery an injunction on the strength of *Millar v. Taylor,* which was made

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[119] Alexander Donaldson, *Some Thoughts on the State of Literary Property*, pamphlet published in London in 1764, cited in [Tompson, 1992], at 27-28.

[120] [Tompson, 1992], at 27; James Boswell, *The Decision of the Court of Session, Upon the Question of Literary Property; in the Cause john Hinton of London, Bookseller, Pursuer; Against Alexander Donaldson and John Wood, Booksellers in Edinburgh, and James Meurose, Bookseller in Kilmarnock, Defenders, (1774),* Notes Upon the Question of Literary Property (taken from Boswell's *Life of Johnson*), 1925, National Library of Scotland, listed X.175.C., Hereafter: [Boswell, 1774]

[121] Morison, ed., *The Decisions of the Court of Session*, Vol. 19 & 20, (1811), at 8307.

permanent in 1772 by Lord Chancellor Bathurst. Donaldson appealed against the latter to the House of Lords. The Lords received his petition in December 1772; the hearing was set for January 1774. The hearing began on 4th February where the Lords issued writs of assistance, requesting the judges of the King's Bench, the Common Pleas and the Exchequer to give their opinions on five questions pertinent to the case and formulated by the House of Lords. Following these opinions, the Lords debated and voted against the existence of copyright at common law in published materials, thus denying Thomas Becket's claim. This case has been commonly interpreted as holding that copyright was recognised by common law but was pre-empted by the Statute of Anne. On the contrary, the Lords clearly decided that copyright had never existed at common law.[122] Confusion between the opinions of the judges and the decision of the Lords is at the core of the misinterpretation of the opinions expressed by them. At the time, by parliamentary procedures it was a contempt punishable by imprisonment to publish any statements made by a member of Parliament in the course of its business.[123] This explains why official reports on the case omitted statements made by the Lords, and state only that the House of Lords overturned the injunction. Fortunately, three anonymous reports including the debates help us to establish the argumentation in the Lords since the judicial opinions are merely advisory.[124] These debates represent the opinions of the House of Lords, which is the tribunal which decided the case.

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122 4 Burr. at 2408, 98 Eng. Rep. at 257 (H.L. 1774).

123 [Holdsworth, 1937], Vol. 10, at 610-11.

124 *The Case of the Appellants and Respondents in the Cause of Literary Property, before the House of Lords: wherein The Decree of Lord Chancellor Apsley was reversed, 26 Feb. 1774*, attributed to a "Gentleman of the Inner Temple", listed as cataloged at the British Museun under classification No 515.f.16(2); another report, *The Pleading of the Counsel before the House of Lords, in the great Cause concerning Literary Property; together with the Opinions of the Learned Judges, on the Common Law*

For my part it is important to realise that the Scottish courts played a decisive role in the development of British copyright law.[125] The Court of Session began in 1746 to receive complaints from London booksellers against a number of booksellers from Edinburgh and Glasgow who were selling reprints in England.[126] Their complaints argued that the reprints were sold in England in violation of the 1739 Act "prohibiting the importation of books reprinted abroad" which were in English.[127] The term "abroad" definitely included Holland, Ireland and the Colonies but it remained unclear whether or not importation of books from Scotland violated the Act. It should be stressed that the Act clearly referred to Scottish courts has having jurisdiction to hear proceedings against alien importers.[128] Finally, in December 1747 the Court of Session concluded that no further action should be engaged against Scottish booksellers. Unsatisfied with the decision, the London booksellers appealed to the House of Lords who sent the matter back to the Court of Session unable to give an opinion on the case in 1751.[129] The Scottish Lords clearly rejected the London booksellers' claims. Lord Kennet was "of opinion that Literary Property is not in the law of Scotland. It is not in the *law of nature*, which is one great fountain of our

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*Copy right of Authors and Booksellers*, in [Holdsworth, 1937], Vol. 10, at 572-73; A third report can be found in 17 Parliamentary History of England 953 (H.L. 1774)

125 Morison, ed., *The Decisions of the Court of Session*, Vol 19 & 20, (1811), at 3295.

126 [Tompson, 1992], at 19.

127 The Copyright Act of 1710 implied only that it was illegal to import any English-language books into England and Wales. The 1739 Act, 12 George II c. 36, forbade explicitely the import into England and Wales of any reprints of a book first written, composed printed, or reprinted there, unless it had not been printed in England and Wales for twenty years before the date of the imported reprint. The Act lapsed in 1747 and therefore was not applicable to Scotland but the 1710 Act was still applied in relation to books printed outside Great Britain. However, the legal situation remained obscure, [Feather, 1982], at 57.

128 *Midwinter v. Hamilton* 1748 & *Millar v. Kincaid* 1748, actually the same case, Morison's, *The Decision of the Court of Session*, Vol. 19 & 20 (1811), at 3295-8307; [Feather, 1987], at 17.

129 Paton's Appeal Cases, *Reports of Cases decided in the House of Lords upon Appeal from Scotland*, T&T Clark, ed.,(1849), at 488-492.

law".[130] Once again judges could not justify any principles of natural justice which could justify perpetual literary property at common law. The London bookseller found themselves out of recourse and unwillingly ended their campaign on Scottish ground. Furthermore, on 28 July 1773 the Court of Session concluded a case brought by John Hinton brought against Alexander Donaldson over the question of literary property. The Court unanimously decided that the judgment had to rest on Scottish law. They held that Scotland had no common law right of literary property, whereas English law rested upon *Millar v. Taylor,* which they claimed not to understand.[131] Lord Hailes decisively observed:

> "Of this right there is not a vestige in the law of Scotland. From Lord Stair down to Forbes, all our authors are silent concerning it. From Lord Stair down to Forbes, all our authors have acted as if there had been no such right."[132]

Furthermore, the Lords concluded that the Act of 1710 did not create a property, but a limited monopoly.[133] Within seven months their conclusions were to be adopted by the House of Lords.

Not only did the Court of Session object to the claims of the London booksellers but also a young advocate, John MacLaurin. In a thoroughly documented legal essay, he reviewed all the relevant litigation to conclude that there was no legal

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[130] Lord Kennet reported in [Boswell, 1774], at 1, and "These gentlemen, the London booksellers, who have obtained so many patents, and even the act of Queen Anne; -though they call *printers* who interfere with them *pirates*, (a cruel name), never pretend that they can hinder *written* copies to be taken. The law, then, is directed only against printing, and is no restraint from writing; though we all know, that, before the art of printing there was no other method of spreading books. It was then a great trade. It may be so again; and the London booksellers would have no remedy. This is a clear proof, that the restraint was introduced after printing began, and that it is no way founded on common law, but on grants; for if it were founded on common law, it would reach against manuscript copies, as well as printed one's : and this to me is demonstration, that these is no common law property in authors" Lord Auchinleck, at 4.

[131] [Tompson, 1992], at 30; Hailes, *Decisions of the Lords of Council and Session from 1766 to 1791*, Vol. 1 (M.P. Brown, 1826), at 536, Hereafter: [Hailes, 1826]

[132] [Hailes, 1826], at 538.

[133] [Boswell, 1774]

foundation for common law copyright. Insisting upon the statutory foundation of literary property, he argued:

> "Supposing Authors to have had a Right of Property antecedent to the Act, yet it cannot be disputed, that the Legislature could annihilate it altogether, or new-model and abridge it at Pleasure. The Legislature has, in the most explicit Terms, declared that Authors, and Purchasers from them, shall have the sole Right of printing their Books for a certain Term of Years, and *no longer*"[134]

Turning his analysis to the attitude of the London booksellers towards the printing practices in Ireland, he critically pointed out:

> "But it is remarkable, that they have never once attempted to call the Booksellers of Ireland to account, though they have suffered most by them; which seems to indicate, that they themselves have no Faith in this new Doctrine, of a Right at common Law, which must have supported them equally in Ireland as in Britain, though the Statute of Queen Anne could not reach that Country".[135]

The fact of the matter was that London booksellers had started publishing their own editions in Ireland in order to compete directly with the pirated editions of their books printed in Ireland. He remarked that if common law copyright existed in England it should have existed in Ireland as well. As a result he deduced that obviously they did not claim such common law copyright simply because they could not. Concluding his argumentation, he insisted upon the evils of perpetual monopolies in books:

> "*Lastly*, The perpetuating the Monopoly of Books, must inevitably enhance their Prices beyond all Bounds, the infallible Consequence of which is to retard, and indeed stop altogether the Progress of Learning. This has been complained of as the Consequence of Patents and Privileges, from their first Introduction; and that these is as much Reason, if not more, for exclaiming against that Abuse at present, than formely, must be felt by every Man, who is desirous of having a tolerable Library of Books, and is not possessed of a most opulent Fortune".[136]

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[134] John MacLaurin (Lord Dreghorn),*Considerations on the Nature and Origin of Literary Property*, subtitled *Wherein that species of property is clearly proved to subsist no longer than for the terms fixed by the statute 8vo Annoe*, 1767, National Library of Scotland, listed 2.5(2),at 32, Hereafter: [MacLaurin, 1767]

[135] [MacLaurin, 1767], at 13.

[136] *ibid*, at 34.

Surely, MacLaurin's conclusions along with the publication in London of James Boswell's *The Decision of the Court of Session*, a few days before the Lords debated Donaldson's case, advanced the position against the common law literary property.

At first, the House of Lords heard counsel for four days and then submitted a set of five questions to the High Court judges. The five questions were:

> " 1. Whether, at common law, an author of any book or literary composition, had the sole right of first printing and publishing the same for sale ; and might bring action against any person who printed published and sold the same without his consent?
>
> 2. If the author had such right originally, did the law take it away, upon his printing and publishing such book or literary composition : and might any person afterward reprint or sell, for his own benefit, such book or literary composition, against the will of the author?
>
> 3. If such action would have lain at common law, is it taken away by the statute of 8th Anne? And is an author, by the said statute precluded from every remedy, except on the foundation of the said statute, and on the terms and conditions prescribed thereby?
>
> [4.] Whether the author of any literary composition and his assigns, had the sole right of printing and publishing the same in perpetuity, by the common law?
>
> [5.] Whether this right is any was impeached, restrained, or taken away, by the statute of 8th Anne.?"[137]

In order to clear the ground, some comments have to be made on the semantic formulation of the questions. Incidentally, it would have been inconsistent to answer the five questions by yes or no.[138] What the Lords asked about essentially was whether or not common law copyright existed in unpublished and published manuscripts in the absence of statutory protection, and in published manuscripts under statutory protection. Hypothetically, a judge who would have denied the existence of common law copyright in all circumstances should logically answer the five questions respectively, no, yes, yes, no, and yes. Consequently not only had judges to have a good understanding of the questions, but also the second and fourth question were

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[137] *Millar v. Taylor*, 4 Burr. at 2408; 98 Eng. Rep. 257 (H.L. 1774); see also 17 Parliamentary History of England 970-71 (H.L. 1774).

[138] [Abrams, 1983], at 1157.

identical but formulated differently as if the Lords wished to check an the consistency of the answers. The overall question was whether there existed a perpetual common law copyright after an unauthorised publication of a manuscript. The formulation of the second question asks whether the act of publication nullifies the common law right which is presumed to exist in unpublished manuscripts, while the formulation of the fourth question asks whether such a right exists in published manuscripts. Consequently, the logical answers to the second and fourth questions should be opposite.[139] These preliminary remarks are intended to point out the apparent contradictions concerning the answers given by the eleven judges. As a result, the relevance of the answers on the point of copyright at common law could be questioned on that basis.

Members of the common law courts debated over the arguments presented by each contestant before answering the five questions. Thurlow criticised the concept of property advanced by the booksellers and its application to literary property. He insisted that their sudden interest in authors' rights was intended only to hide their more personal interests of protecting their monopolies. In introducing the common law of property, they could retain perpetual ownership of the copies.[140] He insisted that the Copyright Act was "a new law to give learned men a property which they had not before", which proved that the common law right had not existed before.[141] In concluding he hoped that the Lords "would likewise [the Scottish Court of Session],

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[139] *ibid*, at 1158.

[140] "He observed that the Booksellers had not till lately ever concerned tehmselves about authors", Thursday April 6, 1775, lettre from Johnson to Boswell, Notes Upon the Question of Literary Property, see [Boswell, 1774]

[141] 17 Parliamentary History of England 954 (H.L. 1774).

by a decree of a similar nature, rescue the cause of literature and authorship from the hands of a few monopolising booksellers".[142] Sir John Dalrymple added also that the Lords of the Court of Session voted ten to one against the appellants, therefore Alexander Donaldson "had a substantial justice on [his] side" and that only England had such a claim of literary property, while it could not be found in "the laws and customs of every nation, ancient or modern".[143] In defence of the plaintiffs, Wedderburn attacked their arguments in putting forward the royal patents and licences attributed to the book-trade and the non-restrictive clauses of the 1710 Copyright Act. He also refuted the argument that property must be tangible by recalling *Millar v. Taylor,* and its judgement in favour of perpetual literary property. Wedderburn emphasised the time and expense incurred by the trade, drawing the conclusion that "if such protection should be now withdrawn, many families would lose their whole estates, and necessarily be involved in ruin".[144] Dunning, arguing in support of the plaintiffs, tried to demonstrate that since authors cease to exercise property right over their composition under statutory provisions, they are better off with customary rules where booksellers buy as cheap as they can and authors sell as dear as they can. He deduced that authors were then well rewarded only because the common law right was prevailing and established by the determination of the King's Bench in *Millar v. Taylor*. Possibly lacking arguments, he concluded sarcastically by comparing the importation of books by Donaldson to England to the importation of "Scotch cattle" as

142 *ibid*, at 957

143 *ibid*

144 *Alexander Donaldson, and another v. Thomas Becket and others* II Brown 1, 1 Eng. Rep. at 846.

an invasion of "the legal purchaser by printing a copy in Scotland, and offering it to sale in London".[145]

Finally the judges voted. The judges recognised that authors have a copyright in an unpublished manuscript and that the right was not lost upon publication but that it was limited to its term by the statute of Anne following publication. As regards to the fourth and fifth questions they voted accordingly seven to four in favour of the existence of perpetual copyright at common law after publication and decided six to five that the right was preempted by the statute. Consequently, the judges by a narrow margin upheld the common law right but accepted that it was superseded by the language and the intent of the statute.

Having heard counsel, the Lords had to decide on the appeal. Lord Camden argued that nothing supported the existence of common law copyright. His powerful speech condemned the argument of the stationers:

> "The argument attempted to be maintained on the side of the respondents, were founded on patents, privileges, Star Chamber decrees and the bye laws of the Stationers Company; all of them the effects of the grossest tyranny and usurpation; the very last places in which I should have dreamt of finding the least trace of the common law of this kingdom; and yet, by a variety of subtle reasoning and metaphysical refinements, have they endeavoured to squeeze out the spirit of the common law from premises, in which it could not possibly have existence."[146]

He reminded the members of the House that authors were not permitted to own copyright on their work, and that the Stationers' Company had the sole right to print.[147] Commenting on the sudden perpetual property claim of the Stationers, he observed that the Statute of Anne was adopted at the lapse of the licensing acts and "[d]uring the succeeding fourteen years, no action was brought, no injunction

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[145] 17 Parliament History of England 967 (H.L. 1774)
[146] *ibid*, at 992-1002
[147] *ibid*, at 993

obtained, although no illegal force prevented it; a strong proof, that at that time there was no idea of common law claim".[148] Then he took the issue of whether the common law should recognise such a right. His attention was focused on the consequences of monopoly, concluding that perpetuity deserved much reprobation and would have become intolerable. As Lord Camden observed:

> "what a situation would the public be in with regard to literature, if there were no means of compelling a second impression of a useful work [...] All our learning will be locked up in the hands of the Tonsons and Lintons of the age, who will set what price upon it their avarice chuses [sic] to demand, till the public becomes as much their slaves, as their own hackney compilers are".[149]

He feared than that printing would find better places in Scotland, the Americas or Ireland.[150] He concluded that the legislature had sealed the question of perpetual right by establishing terms of protection. Another severe blow against the cause of perpetual copyright was given by Lord Chancellor Apsley. It was he who issued the decree against Donaldson; however, at the House of Lords he declared that he had done so because he was bound by the *Millar v. Taylor* precedent. However, it ought to be precised that he was only acting on Chancery on common law right. He then attacked the relevance of any of the internal records of the Stationers' Company on the issue of common law rights.[151] Lord Lyttelton, in favour of the plaintiff, "urged that the science of literature, though not tangible, was nevertheless property; and that it must receive a very sensible shock from the reverse of the decree".[152] Other Lords are reported to have opposed the common law copyright claim and their arguments follow the lines of Lord Camden's statements. The House finally voted on the issue.

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148 *ibid*, at 994-95.
149 *ibid*, at 1000
150 *ibid*, at 992-1002
151 *ibid*, at 1001
152 *ibid*, at 1002

Thirty two voted, with a majority of twenty one to eleven in favour of the reversal of the injunction.[153] The opinions of the Lords reveals a total rejection of the notion of common law copyright. Curiously, Lord Mansfield "did not speak a word on the subject, either as a judge, or a peer, although he had formerly decided in the Court of King's Bench, for the perpetual monopoly, in the case of Thomson's *The Season*, Millar against Taylor".[154] This silence may have been pivotal in the final decision since there may have been a very different vote among the peers. His failure to defend his decision in *Millar v. Taylor* may suggest that there was something he did not want to explain. The strange chronology of the case, the dubious identity of Taylor, the division within the Court, and finally the dropping of Taylor's appeal to the Lords, make the case as dubious as the collusive case *Tonson v. Collins*. An undeniable fact is that the silence of Mansfield allowed Lord Camden to dominate the final debate and make a powerful attack on the respondent's case.

In sum, the Scottish courts initiated an irrevocable process by denying perpetual property to claimants under Scottish law. In England, courts were not really conclusive until *Millar v. Taylor*. First, English judges in *Millar v. Taylor* considered that copies as a form of property had a perpetual existence. Consequently they did not recognise the Act in itself and therefore the limited term of protection. Also, they looked at the Act simply as an additional form of protection. Second, in *Becket v. Donaldson* they finally argued that these rights were originating from the author, who transferred his rights, which are restricted by the Act, to a publisher. Therefore, the

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[153] *ibid*, at 1003; for comments about the vote see [Abrams, 1983], at 1164-65.

[154] *Edinburgh Advertiser* (March 1), cited in Richard S. Tompson, *Scottish Judges and the Birth of the British Copyright*, Juridical Review 1992, at 36.

role of the author became central in the analysis of the Act and not the publisher. Copyright was created by an author. The term of copyright had then to be related to the author and particularly the author's life time, regardless of what he did with the copyright. Once the term expired, the ownership of the book vested in the public domain. Finally the term had been extended by the *post mortem* principle. The Lords considered that, on the principles of natural justice, they could not restrict the exercise of a natural faculty, which is multiplying copies of books. Copies of books have existed in all ages, and they have been multiplied, but never as an exclusive privilege for perpetuity or dictated by natural justice. As a result, common law has always regarded public utility as the mother of justice and equity. Every book consists of two distinct parts ; the material part and the immaterial part, in other words "the doctrine contained in it, which is the facture of the mind".[155] The property in the material part is transferred by sale according to law, and the immaterial part remains with the author. It is therefore concluded:

> "Some have stated the property to exist in the profits of the sale, which, as they assume for the purpose, belong to the original author. But this is only substituting another, and as it seems, a less proper phrase in the place of the word monopoly, which, to use the words of Brooke, is property not properly known. The privilege, however, of monopoly, is an interest or estate well known to the law. It only remains to shew what title the author has to it."[156]

The title is granted by statutory provisions. Consequently, the Lords undoubtedly decided that authors had been granted a temporary privilege established by the Statute of Anne. In sum, the modern law of copyright is a temporary privilege of the sole right of printing and disposing of copies, vested in the author or his assign.

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[155] *Donaldson v. Becket*, II Brown 133, 1 Eng. Rep. 849.
[156] *ibid*

## *Chapter III*

# REVOLUTIONS *and* CONCEPTS *of* INTELLECTUAL PROPERTY

> *"Men of industry or of talents in any way, have a right to the property of their productions ; and it encourages invention and improvement to secure it to them by certain laws, as has been practiced in European countries with advantage and success."*
>
> - Rev. Samuel S. Smith*

The origins of *droit d'auteur* and copyright, in France and in the United States of America respectively, have their roots in the deliberate intervention of political authorities rather than in the spontaneously evolved European legal tradition.

In French law the concept of *droit d'auteur*, a literary and artistic right, involves two elements. The first one, quite similar to its English counterpart, is a temporary property right, or economic right, over the exploitation of works of the intellect. Authors are vested with the exclusive right to control the reproduction, performance, and exhibition of their creation. This right rests on legislation dating back to the French Revolution. The second element, not the least important one, encompasses the moral rights, *droit moral*, a legal expression of the intimate bond which exists between a literary and artistic work and the personality of its author. This fundamental element of the French *droit de la propriété intellectuelle* is intended to prevent any violation of the literary personality and thought of the author, and thus of the work itself. As opposed to the economic rights it is not a property right. Unlike the

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* Reverend Samuel Stanhope Smith, letter written in Princeton, Sept. 27, 1782, in Noah Webster, *Collection of Papers on Political, Literary and Moral Subjects* (New York, 1843), at 173-172.

property right, the moral right had at the outset no basis in any code. It has grown up little by little out of judicial decisions handed down by French courts and tribunals since the middle of the nineteenth century.

In this chapter, attention will be given to the rationales upon which French copyright law is based as well as its American counterpart. It will argue that French revolutionary legislation was in fact a balanced combination of an instrumentalist notion of the public good and of the Enlightenment theory of authorship based upon natural rights. Importance will be given to the development of the concepts of literary property in works of the intellect during the *Ancien Régime* and post-revolutionary period. As Marcel Henrion admitted:

> "our laws of the revolutionary period of which we are justly so proud, are not altogether a product of a spontaneous generation"[1]

Then, it will be established that the concept of *droit d'auteur* evolved from principles, based upon the premise of natural justice, which affirm the value of a technologically neutral protective mechanism, in enriching the exchange of ideas and the expression of information. These principles are the creation of a public domain for the progress of the enlightenment of society, the recognition of economic rights vested in authors, and the necessary creation of a monopoly limited in time. Finally, American copyright law will illustrate the difference between *droit d'auteur* rationale and the copyright law instrumentalist rationale, to conclude with the rationales behind the French *droits moral* and common law moral rights.

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[1] Marcel Henrion, *Appoint à l'étude des privilèges de librairie aux XVI^e et XVII^e siècles*, 6 Revue International de Droit d'Auteur 1955, at 115, Hereafter: [Henrion, 1955]

## CONCEPT OF PRIVILEGED LITERARY PROPERTY IN *ANCIEN RÉGIME*

In France, from the start, initiatives regarding the protection of works of the intellect had come from public authorities, on the one side, and creators and publishers, on the other side. As in other European states, regal authorities initiated and developed a patent system, stemming from prerogative powers, in order to help and control the expanding book trade. This development responded to the needs of creators as well as publishers, who were facing an increasingly competitive market. The *Ancien Régime* granted *privata lex* privileges in the form of grants of monopoly conceived for one specific item to one individual and limited in time. Conceived primarily as industrial safeguards, printing privileges were designed to compensate investors for the costly and risky investments represented by printing. Antoine-Louis Séguier reported in 1777 that:

> "Competition between editions, by multiplying copies, decreased sales. The most famous printers were on the verge of being empowered and several, ruined; at the beginning of the XVIth century, one did not dare go into a business requiring considerable investments. This prior difficulty required a prompt remedy and in order to safeguard "stationers" from annihilation one was compelled to resort to the King's authority : one asked the sovereign for permission to print a given work and prohibition for any other to do so"[2]

French royal authority, whether exercised by Chancery, the *Parlement de Paris*, provincial parliaments, or any other official, granted these commercial concessions as a grace from the king solely on genuine new publications.[3] Works for which it was sought were examined by the authorities who could refuse for the whole or part of the proposed publication. Prominent authors and wealthy publishers as well as humble

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[2] Report given in 1777 by the *Avocat Général*, Antoine-Louis Séguier, cited in Marie-Claude Dock, *Genèse et évolution de la notion de propriété littéraire*, 1 Revue Internationale du Droit d'Auteur 1974, at 164, Hereafter: [Dock, 1974]

[3] Elizabeth Armstrong, *Before Copyright. The French Book-Privilege System*, (Cambridge University Press, 1990), at 22

writers and *librairies* sought *privilèges en librairie*. According to the number of grants attributed, patentees must have been reasonably satisfied with the results since they were prepared to pay for the cost of securing a privilege. Book privileges did not originate as such in France; however, the strongly unified Capetian kingdom had a better chance of providing some effective protection than most other European states of similar size. As such, Paris, like the city of Venice, became one of the most important centres in Europe for the trade of books.

The study of early French privileges has allowed scholars to carry out detailed analysis of the arguments put forward in seeking privileges.[4] The *Ancien Régime*, like its European neighbours, instituted the concept of literary property based upon the justifications for patents-monopolies. Authors, printers or publishers alike relied on similar arguments. Considerations related to public usefulness and public welfare were relatively common. Not only did this argument reflect the interest of the crown in advancing knowledge within the realm, but it also corresponded to the necessary criterion of newness normally imposed on publications. Most of all, pleas considered the expenditure of time, skills and money involved in producing new books, expressing the need to recoup the investment before others could be allowed to re-print them. Clearly, economic concerns primarily motivated applications for book-privileges in order to deter pirate publications.[5] Authors, as investors in their own

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[4] *ibid*, at 79.

[5] "With great care, labours and cost, he discovered the true original types of the Pandects... But he is in doubt lest several printers in our Kingdom and others, as soon as the said books would see the light of day, wish to imitate the order, correction and presentation of the said printing and to sell and display such books of their in our Kingdom; ny so doing, the said supplicant would be deprived of the salary if his labour and of costs he incurres and will, were it not pleasure to provide it for him", Emile Montagnon, *Principes de la législation des droits d'auteur* (Lyon, 1883), at 5, cited in [Dock, 1974], at 172.

manuscripts, sought privileges to secure temporary monopolies in order to gain financial benefits from their work. Moreover, the concept of equity, and especially of natural justice, extended especially to authors since manuscripts originated from their own labour. The Parliament of Paris, for instance, recognised explicitly in 15 March 1586 the right of Marc-Antoine Muret, a French poet and scholar, to his own creations, annulling a privilege granted to the publisher Nicolas Nivelle. His advocate pleaded that:

> " [...] the author of a book is full master thereof and as such may dispose of it freely; even to possess it always under his private hand, as a slave, or emancipate it by granting it common freedom; and to grant this pure and simple, without keeping back anything, or with the reservation, after a sort of fatherhood right, that nobody but himself could print it before some time; which is indeed a contract void of a proper name and compulsory hither and yon, because it holds its cause equally just on both sides by one unwilling to give the public what belongs to his private, were not the public to give him as a reward this prerogative and thus to the contrary."[6]

Clearly, the plea advances natural justice arguments formulated as "a sort of fatherhood", which gives Muret the exclusive right to put on the market his works first and therefore choose who will publish it. It should be stressed, however, that such a recognition turns into economic motivations justifying grants of privileges.

Further analysis of privileges granted to authors prove that public authorities were concerned with the relationship between authors, their work and the trade. Take the case of Rabelais, author of *Pantagruel*, who obtained, on behalf of the king, a privilege from the Cardinal of Chatillon in 6 August 1550.[7] According to the text of the privilege, Rabelais was given the right of publishing his works, of putting the copies in circulation, the right of revision and correction, and even of what could be considered a moral right, the right of paternity or to prevent false attribution. The

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[6] *ibid*, at 174.
[7] [Henrion, 1955], at 125.

privilege implied that all the works of Rabelais in French, Italian and Greek, as well as past, present, and future, were protected for ten years. As regards moral rights, the text was intended to reprehend publishers who committed acts against Rabelais's personality and work. The formulation used clearly sufficed to determine the position of the granting authority:

> "the Printers corrupted, depraved and perverted the said books in several places ; furthermore they printed several other scandalous books, in the name of the said suppliants [Rabelais], to his great displeasure, prejudice and ignominy, totally disavowed by him, as false"[8]

It should be stressed, nonetheless, that our author was well known for his controversial publications, and he might well have put forward printers and publishers's mistakes to cover up his own mistakes. As a matter of fact, it is reported that the Faculty of Theology of Paris and the Parliament of Paris wanted to prevent the publication of volume four of *Pantagruel,* but the royal privilege superseded the judges' decisions.[9] Another example showed that in 2 February 1611 the king granted to Thibault Desportes the right to print the works of his late brother, the famous poet Philippe Desportes. As Marcel Henrion justly remarked "one might be tempted here to see here an acknowledgement of the hereditary vocation of Thibault on the patrimony constituted by the literary work of his brother".[10] Nevertheless, Thibault was an influential private secretary and Grand Court Usher of France, who may have simply received book-privileges on his brother's works as a form of gratitude for his services. In my opinion, such examples show that privileges are motivated by instrumentalist justifications establishing temporary monopoloy in a commodity.

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[8] *ibid*, at 124.
[9] *ibid*, at 125.
[10] *ibid*, at 130.

Similarly to England, the French crown developed its own peculiar system which greatly influenced the concept of intellectual property. For instance, grants of monopolies became an offshoot of censorship, allowing the crown to exercise its political control on publications.[11] Not only were grants of privileges attributed following formal applications, but they were also conditioned and validated upon compliance with certain formalities. Measures such as deposit of copies in the National Library of Blois, inclusion of the text of the privilege in each printed copy, and registration of copies with the guild of the publishers were intended to keep a firm grip on the trade.[12] Nonetheless, the French crown, as opposed to its European counterparts, objected to the authority of the papacy in controlling religious and political orthodoxy. As early as the Valois dynasty, and especially Francis I, the crown jealously exercised political and religious censorship. This was confirmed in 1682, when Louis XIV gained the "Four Articles" from the assembly of the clergy, reasserting pre-eminence of ecumenical councils over the pope and the autonomy of the French Catholic Church.[13]

Moreover, Absolutism and Mercantilism, which characterised the exercise of the monarchy, added to the unique development of intellectual property in France. The *Bourbon* dynasty, and especially Louis XIV, personalised the heyday of the absolute monarchy, with the help of Jean-Baptiste Colbert who elaborated the theory of Mercantilism. This policy, applied to trade, was intended to produce an excess of

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[11] Article 78 of the 1566 *Ordinance de Moulins*, forbade printers to print any work whatever its content without license from Chancery on pain of strangling or hanging.

[12] [Henrion, 1955], at 123.

[13] David Parker, *The Making of French Absolutism* (Ed. E.Arnold, 1983), at 122.

national exports over national imports in order to reach self-sufficiency.[14] To that effect, the crown indirectly took control of the existing guilds by legislative means, in order to regulate manufactures and other commerce to realise its policy. Most importantly, patent-monopolies represented one of the tools which allowed the crown to secure such control. For instance, the crown regulated public performances of dramatic works by vesting in the *Comédie Française* the exclusive right to perform theatrical works. Moreover, Colbert created a corporate body formed mainly of the Paris printers' and booksellers' guilds, which received commercial-monopolies. The patent-monopoly system contained all the basic elements of a traditional European patent system, such as the examination of utility and commercial success, but omitted the inventive step leading to the concept of intellectual property.[15] As distinct from Venice, but like England, it was not the inventive aspect of inventions or literary creations which inherently established property, but the mere administrative grants of privilege that could be given or refused solely upon the king's grace. The corporate monopolies were to be strengthened in 1723 with the promulgation of the *Code de la librairie* regulating the Parisian publishing world, and extended to the entire nation in 1744.[16] This code defined a literary privilege as a legal exclusivity on the commercial publication of the work granted by the state.

Before the six royal decrees on the book trade in 1777, then, there was no legal recognition of authorship or of the personal relation of an author to his text. In

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[14] *ibid*, at 73-74

[15] Frank D. Prager, *A History of Intellectual Property from 1545 to 1787*, 26 Journal of the Patent Office Society 1944, at 721, Hereafter: [Prager, 1944]

[16] Jourdan, Decrusy, and Isembert, eds., *Recueil général des anciennes lois françaises*, Vol. 21 (Paris, 1826), at 216-252.

practice, authors sold their manuscripts to a bookseller if they could not secure by themselves a privilege. As a matter of fact, privileges to print and publish made no legal distinction between dead or living authors, and anonymous or collective works.[17] Attribution of copyright privileges was merely a matter of grace founded on equity as an affirmation of the absolutist divine interpretation of regalian prerogatives. The law of 30 August 1777, *Arrêt du conseil portant règlement sur la durée des privilèges en librairie*, echoed this royal compromise opposing against the notion that privileges could be a matter of claims or property, equitable principles to justify grants of privileges. The introductory paragraph of the *Arrêt* made clear that:

> "His majesty [Louis XVI] has recognised that a privilege for a text is a grace founded in justice [...] the perfection of the work requires that the publisher be allowed to enjoy this exclusive claim during the lifetime of the author [...] but to grant a longer term than this, would be to convert the enjoyment of a grace into a property right, and perpetuate a favour against the intentions of the title itself which determines its lenght; it would be a recognition of a monopoly."[18]

This engrained notion of mercantilism was only overcome in 1789, to the effect that until then, while inventions or creations are generally useful, they differ from property, and especially intellectual property, in that they may or may not be protected by the laws as the state sees fit. Mercantilism and Absolutism had to be broken down to a large extent, and especially revolutionary measures, in order to free the ground for

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[17] Carla Hesse, *Enlightenment Epistemology and the Laws of Authorship in Revolutionary France, 1777-1793*, 30 Representations 1990, at 112, Hereafter: [Hesse, 1990]

[18] "S.M a reconnu que le privilège en librairie est une grace fondée en justice, et qui a pour objet, si elle est accordée à l'auteur, de récompenser son travail, si elle est obtenue par un libraire, de lui assurer le remboursement de ses avances et l'indemnité de ses frais: que cette différence dans les motifs qui déterminent les privilèges, en doit produire une dans sa durée plus étendue, tandis que le libraire ne peut se plaindre, si la faveur qu'il obtient est proportionnée au montant de ses avances et à l'importance de son entreprise: vue la perfection de l'ouvrage exige cependant qu'on en laisse jouir le libraire pendant la vie de l'auteur avec lequel il a traité; mais qu'accorder un plus long terme, se seroit convertir une faveur contre la teneur même du titre qui en fixe la durée; ce seroit consacrer le monopole", in Jourdan, Decrusy & Isambert, eds., *Recueil général des anciennes lois françaises*, Vol. 25 (Paris, 1826), at 109.

the recognition of intellectual property.[19] In comparison, Great Britain had embraced the theory of *laissez faire,* which gave rise to the Statute of Monopolies curtailing abusive royal patents and preparing the way for the statute of Queen Anne. As regards to the 1777 decree, Louis XVI strengthened, with similarity to the Statute of Anne, the legal position of author in creating two categories of privileges, a *privilège d'auteur* distinct from the traditional *privilège en librairie*. The former granted exclusively to authors, on a legally grounded favour, a perpetual property right over their creation in recompense for their labour, unless the title was transferred to a third party. Following the death of the author, the work fell in to the public domain, in fact the king's domain, to be enjoyed by any licensed publisher with the permission of the king. By contrast, a *privilège en librairie* was limited to the lifetime of the author and non-renewable. The difference of the royal motive governed the differences in the extent of both privileges. For an author, the privilege of publishing was the price of his work; for the bookseller it was the security covering his financial advances. The overall aim was to increase dissemination of ideas in consolidating the power of authors over their work rather than in publishers. More fundamentally, the legal recognition of authors expressed a well-defined policy. As Carla Hesse defines it:

> "The first aim of the Crown was to individualize knowlege by creating the author as a privileged site of regulation - in both senses of the term, politically and legally. It was also the aim of the Crown to deprivatize texts whose authors were dead, to remove them from the private (property) claims of Publishers' Guilds."[20]

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[19] On 5 February 1776, A.J.R. Turgot, Comptroller general of France, under Louis XVI issued an edict abolishing altogether the guilds in order to emphasise the rights of inventors and creators in their invention and works. However, it should be noticed that Turgot had exempted the book guild from the Edict. As regards to the Edict itself, it was revoked on 12 May 1776 along with the dismissal of Turgot, [Prager, 1944], at 734.

[20] [Hesse, 1990], at 113.

As a direct consequence, recognition of literary property vested in authors was established under absolutist principles, and created a perpetuity right in ideas. Also, it constituted a direct control over the form, content and means of dissemination of knowledge without any intermediary between the state and authors. Unlike Great Britain, where Parliament was in effect granting right to authors, the French monarch kept his prerogative to grant privileges to authors.

The promulgation of the 1777 *Arrêt* mirrors ongoing debates of the time on the origins and nature of literary property. Publications of ancient authors dwindled to give room to new publishable materials available from living authors, with new ideas reflecting society's interests. In other words, the professional man of letters came in to existence. Within the context of the struggle of authors against grants of privileges, and between the Paris booksellers and their counterparts in the provinces, the traditional system of royal privileges found opponents. It appeared that the Paris booksellers had obtained more privileges than the provincial ones. As a result, difficulties arose in renewing these privileges, and provincial publishers opposed their renewal. They argued that in the interest of the public wider dissemination of great works was necessary. In other words, they put forward the theory of the public domain. On the contrary, the Parisian booksellers put forward the theory of the author's right. Their advocate, Louis d'Héricourt, argued that the work was the creation of the author and belonged to him. He was simply transferring his property in the work to the publisher, who takes the risks of publication, the main attribute of the right being perpetuity. The argument sounds familiar. The London booksellers had

already attempted a similar argument. Accordingly, Louis d'Hericourt pointed out that:

> "Having no rights in authors' works, the King may not transmit them to anybody without the consent of their legitimate owners... There must be no doubt that privileges which authors and booksellers are for the present obliged to obtain may only be considered as genuine approvals."[21]

As a result, renewal of existing privileges was merely the recognition of the state of affairs where a new word, property, was substituted for privilege. Moreover, in 1767 André-François Le Breton, chief officer of the Paris Booksellers' and Printers' Guild, succeeded in securing the support of Denis Diderot.

The case was occasioned by the affair of La Fontaine, where the king's council had issued a privilege to La Fontaine's grandchildren although the author himself had received previously a privilege which was sold and still in possession of a publisher. Diderot's *Lettre sur le commerce de la librairie* came to the defence of privileges affirming author's property in their work against the notion of the king's grace. Consequently, he argued in favour of the original privilege of the elder La Fontaine, and for the new one to the benefit of his decendants. It should be stressed that Diderot's support for perpetual property should be highlighted since he had declared himself the enemy of monopolies. His position can be easily rationalised. He had incorporated the doctrine of author's perpetual right in the broader concepts of a free society, where ideas are an inviolable form of property because they spring from the individual's mind. Consequently, such privileges were necessary exceptions as "the

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[21] Laboulay and Guiffrey, *La propriété littéraire au XVIII^e siècle*, (Paris 1859), at 21-40, cited in [Dock, 1974], at 189.

best guarantee of the progress of knowledge and the spread of enlightenment."[22]

According to Diderot the terms of the issue were:

> " The question is whether a privilege should be classified as one of the obnoxious monopolies ... You will say it is a monopoly in derogation of Common-Law rights. That is quite true.
>
> ... And, you will add, it must have seemed harsh to concede to one what was refused to another.
>
> It seems harsh ; but either that is done, or no one can ever plead the cause of the first occupant and of legitimate possession, founded on risks, labour and advances. However, so that the derogation of Common-Law rights might not be excessive, they saw fit to limit of this monopoly.
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> ... The author is master of his work, or nobody is master of his goods ..."[23]

These new ideas taken up by La Fontaine's grandchildren had been also advocated by other heirs, such as the families of Crebillon, Luneau de Boisgermain and Fenelon. They all claimed the right to sell their manuscripts to editors of their choice and to publish and print the books themselves. Also, they asked that the exclusivity for editing, printing, and selling, implied by royal privileges, should be generalized to all publishing companies with which authors had already contracted. Moreover, authors' and families' claims extended beyond their classical individual freedom. They challenged directly the right of the king to grant privileges at his pleasure, which was formalised by the traditional mention "*au bon plaisir du Roy*". More importantly, freedom to create or not, to publish or not, under any circumtances, was sought as a fundamental right of anyone who creates or who exercises a creative talent.[24] It should be stressed that it was common practice, for instance, to employ ghostwriters. As Pierre-Yves Gautier observed:

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[22] [Hesse, 1990], at 115.

[23] Denis Diderot 1767, cited in [Prager, 1944], at 754.

[24] Georges Michaelides-Nouaros, *Le Droit Moral de l'Auteur* (Paris, 1935), at 183, Hereafter: [Nouaros, 1935]

> "before the French Revolution, it was commonplace for high-ranking princes or clerical dignitaries to claim letters and meditations as their own; if their work were to be published, few readers were fooled, or cared."[25]

Also, it should not be forgotten that sovereign powers had regularly forced artists to create against their own wishes, and that censorship limited the scope of creativity.[26] For instance, the question still remains whether or not Leonardo Da Vinci moved to Amboise Castle freely upon the invitation of Francis I, conqueror of Marignan.

In sum, I venture to say that the 1777 decree is identical in principle to its British counterpart, and only the mechanisms differ. The argument advanced by printers was based upon a gross mis-interpretation of authorship or intellectual property. The Paris publishers mixed up privilege with property title. Logically, provincial publishers opposed that view, addressing differently the purpose of privileges as temporary monopolies sanctifying freedom of exploitation in order to enable an author, or a publisher, to recover his costs. Once the goal was reached, privileges had therefore no *raison d'être*.

The 1777 decree set up a system of literary property based upon two principles: public domain, and exclusive economic right. In order to assure a decent economic return on investments, the king granted a pivilege to the copyright owner. This privilege was believed to be a necessary measure which allowed appropriation of books as commodities and gave enough incentive to authors, printers and investors alike to produce more work. To that effect, the public domain was enlarged for the

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[25] Pierre-Yves Gautier, *L'Oeuvre écrite par autrui*, 1 Revue Internationale du Droit d'Auteur 1989, at 65.

[26] During the creation of Westmister Abbey, Artists and artisans were impressed by royal decree to work for the Crown. Also, it is reported that Fra Filippo Lippi was imprisoned by Cosimo de Medeci until a desired painting had been completed, see MacNeil, *Some Pictures Come to Court*, Harvard Legal Essays, 1934, at 247.

benefit of society; moreover, the principle of public domain limited the term of the privilege to the length necessary to give a fair return. Incidentally, privileges were also attributed as a means of equity. Since authors were the true originators of future commody, they received grants of privileges as a priority. As opposed to the Statute of Anne, the *Arrêt* allowed the state to keep a tight control on publication as a means of censorship. Therefore, authors were fully vested with their economic rights. Nonetheless, this system could only efficiently control commodities or physical expressions of the intellect, which made it dependent upon technologies embedding works in material forms, such as printing.

Breaking away from the two principle model, the issue of literary property was articulated differently by Marie-Jean-Antoine Caritat, marquis de Condorcet. In his 1776 pamphlet, *Fragments sur la liberté de la presse*, Condorcet rejected pre-publication censorship and monopolies altogether. He suggested the enactment of liberal laws against libel and sedition, assuring freedom of expression and commerce. Condorcet attacked "both the royal theory of literary privileges and the theories of authorial property rights advanced by Diderot", on the grounds that there was no property in ideas.[27] Ideas are inherent in nature and belong to society as a whole, while no individual claims on knowledge may attribute property or privilege. As a result literary property is strictly limited as Condorcet defined it:

> "It is thus uniquely for expression, for phrases, that privileges exist. It is not for the substance of things [les choses], for ideas; it is for words [les mots], for the name of authors."[28]

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[27] [Hesse, 1990], at 116.
[28] cited in [Hesse, 1990], at 116.

Ultimately exclusive rights in literary works reduce rather than enhance public debate. Fundamentally, he argued that knowledge is "objective, inhering in nature", and therefore property to all, as opposed to Diderot who viewed ideas as "inherently subjective and individual", springing from the author's mind and constituting his inviolable private property.[29] Both approaches were going to influence and formulate the revolutionary decree of intellectual property.

[29] [Hesse, 1990], at 117.

## THE FRENCH *RÉPUBLIQUE* AND INTELLECTUAL PROPERTY

In August 1789, the Constituent Assembly abolished the principle of privilege but differed over resolution of the question of corporate monopolies and privileges. It declared the freedom of the press as part of the declaration of the *Droits de l'Homme et du Citoyen.* The intention was to liberate the minds of citizens from royal censorship, and to liberate the presses in order to spread enlightenment. The march towards intellectual property was initiated following a dispute between theatre authors and the *Comédie Française* over the exclusive right of the latter to produce theatrical works. In response to petitions, the Assembly recognised the performance right of authors in January 1791. The law abolished all past privileges attributed to the *Comédie Française,* and recognised dramatists' exclusive property rights until five years after their death, at which point the work would become part of the public domain. The decree is predominantly pre-occupied with the recognition and enlargement of the public domain proclaiming the rights of all citizens to open their own theatres and to produce plays. In March 1791 the *Assemblée Nationale* abolished the exclusive monopolies of the former Publishers and Printers' Guilds on the trades of publishing, printing and bookselling.[30] The death warrant of the guilds concerned authors indirectly. The ideology of freedom of commerce sponsored a new tax law "as much in the service of state revenues as in that of social, economic, or cultural freedom: more business meant more taxes."[31] As a result, this massive deregulation of

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[30] Carla Hesse, *The Dilemmas of Republican Publishing, 1793-1799*, in *Publishing and readership in Revolutionary France and America* (London, 1993), at 61, Hereafter: [Hesse, 1993 (a)]

[31] Carla Hesse, *Publishing and Cultural Politics in Revolutionary Paris, 1789-1810* in *Publishing and readership in Revolutionary France and America* (London, 1993), at 56, Hereafter: [Hesse, 1993 (b)]

the trades of printing, publishing, bookselling and producing theatrical plays was intended to institute a free market in ideas, enabling dissemination of ideas as the cultural ideal of an enlightened nation.

The results were devastating for the trade. Literary piracy ran rampant, provoking bankruptcies, since no laws establishing literary property provided adequate protection of investments in publications. In response, the National Assembly enacted on 19 and 24 July 1793 a decree establishing the exclusive reproduction right vested in authors in order to restore order within the trades. Both decrees form the cornerstone of the French intellectual property legal system. Apart from successive amendments the two decrees stood until the Law of 11 March 1957 which codified for the first time jurisprudence and doctrines developed from the decrees.[32] What is important to realise is that the decree of 1793 was not an overwhelming recognition of authorship but a self-evident necessity required for the benefit of society.

The revolutionary debate on literary property evolved out of legislative efforts to restore the book-trade and to control seditious publications. On the one hand, the new liberties acquired from the massive liberalisation of the trades brought chaos. Jean-Baptiste Lefebvre de Villebrune, director of the *Bibliothèque Nationale,* outlined acutely the causes of the crisis.[33] First, not only were there "fewer customers" within the new nation, but also the people "incapable of being republicans" had fled the

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[32] "La législation révolutionnaire, sobre comme d'une inscription dans le marbre, selon l'expression de Marcel Plaisant, allait régir la France pendant plus de cent ciquante ans; jusqu'à la loi du 11 mars 1957, les textes législatifs de 1791 et 1793 ne furent que l'objet de légères modifications et de divers compléments.", Claude Colombet, *Propriété littéraire et artistique et droits voisins*, 7e ed. Précis Dalloz (1994), at 4 -7, Hereafter: [Colombet, 1994]

[33] Lefevbre de Villebrune, "Considérations sur le commerce de la librairie française", in *Procès-Verbaux*, ed. Guillaume, Vol. 3, at 613, cited in [Hesse, 1993 (a)], at 63.

country. In other words, people who simply by taste, pleasure or status created libraries retracted from the market. In fact Villebrune, I venture to say, refers tactfully to the aristocracy and other influential people who supported the trade as patrons to a large extent. He then gives an account of the patriotic citizens "who educate themselves and read in order to educate themselves, absorbed by the defense of the fatherland or by the posts that they occupy, are not reading or are reading much less." A direct result of the civil wars in Vendée and Brittany along with the revolutionary wars against hostile European powers, the war time economy paralysed French cultural life to a state of inertia. Moreover, the successive regimes prohibited exports of any kind, and especially of books, "to hostile countries" with which the trade had branches of exports. Furthermore, "the obstacles imposed on commerce with neutral countries" eradicated chances for the trade to explore foreign markets or divert commercial prohibitions on hostile countries. On the other hand, the new regime had to face a flood of anonymous, seditous and libellous pamphlets. Many favoured requiring authors to sign published works in order to hold them accountable for their publications. The National Assembly had to face a "conservative backlash against the collapse of all regulation of the printed word", added to pressing economic complaints from publishers.[34] Fundamentally, the Assembly had to resolve opposing views as to the freedom of the press and literary property. The Committee on the Constitution, presided over by a moderate, the Abbé Emmanuel Sieyès, was entrusted with the task of submitting a proposal which could restore order and check the radicalisation of the revolution within the country.

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[34] [Hesse, 1990], at 118.

On January 1790 Emmanuel Sieyès presented to the National Assembly a comprehensive *projet de loi* on sedition and libel which could meet the commercial interests of book publishers and the political imperative of the National Assembly.[35] The proposal in itself reflected the influence of moderate men such as Lafayette, Rochefoulcauld, and especially Condorcet. As a matter of fact François Lanthenas publicly attributed the proposal to "MM. Condorcet et Sieyès".[36] This *project* intended to hold authors, publisher, and printers alike accountable for their publications establishing a property privilege limited to the authors' life plus ten years. Assuming that Condorcet participated in the draft of the proposal, it represented a change in his position since he objected to the *Ancien Régime* inquisitorial institutions. Also, as Carla Hesse reported:

> "instead of denouncing literary property as a privilege, they claimed instead that "the progress of enlightenment, and consequently the public good united with notions of distributive justice to necessitate that the property of a work should be guarded to the author by law.""[37]

Aside from the repressive character of the *project* on authors, important considerations on literary property can be drawn from that position. The notion of property in ideas is introduced as a privilege limited in time. The limitation is justified, not by private claims on ideas from authors, but rather by the necessity to access ideas freely for "the progress of enlightenment". Nonetheless, ideas are not entirely free from individual claims since they become a commercial commodity protected by law. Above all, freedom of expression, and consequently of the press, are fettered from the imposition of accountability and responsibility as a police measure.

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[35] [Hesse, 1993 (b)], at 797-114.

[36] François Lanthenas, *De la liberté indéfinie de la presse* (Paris 1791), at 6, cited in [Hesse, 1990], at 135.

[37] [Hesse, 1990], at 119.

The whole proposal attempted to regulate and limit a natural right, in contradiction to the inviolability of the rights of all individuals proclaimed in the *Déclaration des Droits de l'Homme et du Citoyen*, especially article 17 stating the *droit sacré* to property.[38] Accordingly, the National Assembly refused to vote on the *projet* on the basis of the repressive character of the proposal. Moreover, criticism attacked the notion of literary property, introduced by Sieyès. For instance, Louis-Félix Guynement, Comte de Kéralio, rejected the *projet* on the basis that it disguised "a regime of privilege into a rhetoric of property" which represented a threat to freedom of thought inhibiting the expansion of human knowledge, since "printed matter sold to the public belongs to the public".[39] He rejoined Condorcet on the principle that knowledge is social in character and belongs to all. Another attack stemmed from printers and publishers themselves, who reintroduced Diderot's argumentation insisting on the chaotic situation of the trade and of French letters. Incidently, a proposal, the Hell *projet*, was published in summer 1791, advocating literary property transmissible in perpetuity similar to the Old Regime literary privilege.[40] Finally, it is worth mentioning the dissenting view of Charles-Joseph Panckoucke, dominant publisher in Paris, who defended the guild in order to regain control of the work force and to aid in monitoring property titles. Accordingly he proposed to introduce a law similar to the Copyright Act of Great Britain which would fulfill his aspirations for an

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[38] Art.17, *Déclaration des Droits de l'Homme et du Citoyen* (1789).

[39] Louis-Félix Guynement de Kéralio, *De la liberté d'énoncer, d'écrire, et d'imprimer la pensée* (Paris, 1790), at 51-53, cited in [Hesse, 1990], at 121.

[40] *ibid*, at 123.

enlightened nation where public interest limited private claims and where ideas are freely accessible to all.[41]

Critical changes in the political and legislative relolutionary scene helped finally to establish the 1793 law on literary property. On the one hand, advocates of perpetual property in ideas found themselves isolated from the political debate. First they lost support from the Publishers' and Printers' Guild since from March 1791 corporations were abolished. The suppression of the guild deprived the perpetual property lobby of its political force. Also, a total re-organisation of the Assembly's committees resulted in transfer of powers from the Constituent Assembly to the Legislative Assembly on October 1791. Similarly, Condorcet was entrusted with the presidency of the new Committee on Public Instruction and was joined by the Abbé Sieyès. Since the Assembly voted a distinct law dealing with libel and sedition in September 1791, the Committee was able to look at the question of literary property solely in terms of education and encouragement of knowledge. The Hell *project* seemed to have been lost between the transfer of jurisdiction from the former Committee on Agriculture and Commerce to the new Committee on Public Instruction. As a matter of fact, the Assembly seems never to ave never discussed the proposal.[42] On the other hand, a dispute between the *Comédie Française* and theatre authors who protested against the property privileges of the former on dramatic works initiated the first recognition of authors' rights. Founded in 1680, the *Comédie Française* had at the time the unique privilege to perform and publish theatrical works. Leading the attack, Beaumarchais called for the abolition of its privilege. A

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[41] [Hesse, 1993 (b)], at 61
[42] [Hesse, 1990], at 125.

petition was presented to the Assembly in August 1790 advocating property in dramatic works in the lifetime of the author plus five years after his death, and freedom to open a theatre. Furthermore, they introduced a clause requiring written consent from living authors to perform their work. In fact, the law used some of the terms of the Seyiès proposal on libel and sedition. Mirabeau drafted a *project de loi* which was to be presented to the Assembly by the well known Isaac-René-Guy Le Chapelier on behalf of the Committee on the Constitution.[43] The proposal, a redraft of the Sieyès proposal on literary property, defended theatre authors' works alone. On 13 January 1791 the proposal passed into law, abolishing all past privileges, recognising for living authors and five years after their death the right to be produced anywhere as they wish. Plays by authors dead for more than five years were declared part of the public domain. Moreover, the works of Corneille, Molière, and Racine fell instantly into the public domain, breaking the monopoly of the *Comédie Française*.

Traditionally, the 1791 decree has been interpreted as the formal recognition of author's rights. In fact, the 1791 decree is predominantly pre-occupied with the recognition and enlargement of the public domain. Authors' property represents solely a means to enlarge that domain. As Carla Hesse argued, "authors represented themselves as servants of the public good, of its enlightenment, in opposition to the private interests of publishers and theater directors."[44] This traditional misconception, that the law is supported by author-oriented rationales, finds its origin in the famous

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[43] "Mais ils prétendent être propriétaires sans partage des chefs-d'oeuvre de Corneille, Racine, Molière, Crébillon et autres, et de tous les auteurs qui, par la disposition d'un règlement, ont, suivant les comédiens, perdu leur propriété, ou qui, sous la loi du privilège exclusif, ont traité avec eux. Tel est le débat que vous devez terminer par une loi générale sur les spectacles, sur la propriétédes auteurs, et sur la durée qu'elle doit avoir", Rapport Le Chapelier, *Bulletin de l'Assemblée Nationale* (Séance du jeudi au soir), Le Moniteur Universel 15 janvier 1791, Hereafter: [Le Chapelier, 1791]

[44] [Hesse, 1990], at 126.

*Rapport* delivered by Le Chapelier in the National Assembly, and especially the famous extract:

> "The most sacred, the most legitimate, the most unassailable, and [...] the most personal of all property, is the work which is the fruit of a writer's thoughts ;"[45]

The extract taken out of its context can be interpreted as the recognition of authors' property in published works. However, Le Chapelier went on to specify that:

> "When an author prints his work or produces a play, he gives them over to the public, [...] who appropriates them if they are good" [46]

The public domain is in the nature of things; however, it is equitable to authors that they receive a lifetime proprietary right plus five years for the heirs as a reward for their work. Nonetheless, Le Chapelier stressed that such right must be viewed as an exception where the principle is the public domain. Incidentally, Le Chapelier observed that the British Copyright Act protects authors too much to the detriment of the public domain. Consequently, I venture to say that Le Chapelier was in accordance with the philosophy of the Revolution which is based upon the theory of natural justice. The principle of public domain defends the Rights of Man and the Citizen to access ideas freely. The Revolution put forward the principle of public domain, and therefore limited instrumentalist theories just to establish authors' rights as an exception in order to enlarge the nation's cultural heritage. Consequently, an

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[45] "La plus sacrée, la plus légitime, la plus inattaquable, et, si je puis parler ainsi, la plus personnelle de toutes les propriétés, est l'ouvrage fruit de la pensée d'un écrivain ; cependant c'est une propriété d'un genre tout différent des autres propriétés.", [Le Chapelier, 1791]

[46] "Lorsqu'un auteur fait imprimer un ouvrage ou représente une pièce, il les livre au public, qui s'en empare quand ils sont bons, qui les lit, qui les apprend, qui les répète, qui s'en pénetre et qui en fait sa propriété. Il semble que, par la nature des choses, tout est fini pour l'auteur et pour l'éditeur quand le public s'est de cette manière saisi de la production ; cependant a considéré qu'il était juste de faire jouir un auteur de son travail, et de lui conserver pendant sa vie, et à ses héritiers quelques années après sa mort, le droit de disposer de l'ouvrage ; mais c'est une exception qui, dans notre ancien régime, était consacrée par des privilèges royaux; qui, en Angleterre, est l'objet d'un qui, dans notre nouvelle législation, sera l'objet d'une loi positive, et cela fera beaucoup plu sage. Sortez du principe, mettez l'exeption à la place, et vous n'avez plu de base pour votre législation, et vous méconnaissez qu'un ouvrage public est de sa nature une propriété publique.", [Le Chapelier, 1791]

author represents "a hero of public enlightenment, rather than a selfish property owner."[47] The exclusive rights vested in authors are necessary to the perpetuation and development of the revolutionary ideals. Accordingly, individual claims are limited since literary works belong to and should be enjoy by many individuals simultaneously. Also, the principle of public domain put forward by Le Chapelier required from 1792 that authors notify the public that they have retained their rights on plays, as well as to deposit a copy with a notary. Unless these formalities were fulfilled, the rights of the author would never vest.[48] Such formalitites undercut the notion of a perpetual right inherent in authors in published matters.

By 1793 the revolutionary legislators shifted their *droit d'auteur* rhetoric away from the Le Chapelier principle toward a stronger recognition of proprietary rights in works of the mind after publication.[49] The 1793 decree established a mechanism for promoting and ensuring public enlightenment by encouraging and rewarding intellectual creativity. The Committee on Public Instruction presented a proposal on 19 July to the Assembly which was passed without any discussion following its defense by Joseph Lakanal.[50] Like Le Chapelier's report, Lakanal's report seems to adopt a more favourable attitude towards authors. Nonetheless, the emphasis on the protection of authors reported by the Committee was presented as not detrimental to society and therefore not in relation to the public domain either. As a result, Lakanal simply announced a property right in works; however, he never asserted like Diderot

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[47] [Hesse, 1990], at 127.

[48] Jane C. Ginsburg, *A Tale of Two Copyrights: Literary Property in Revolutionary France and America*, 64 Tulane Law Review 1990, at 1008, Hereafter: [Ginsburg, 1990]

[49] [Hesse, 1993 (b)], at 114-124.

[50] "Le rapporteur lit un projet de décret qui est adopté en ces termes:", Raport Lakanal, "*La déclaration des droits du génie*", Le Moniteur Universel 21 July 1793, Hereafter: [Lakanal, 1793]

that an "author is the master of his work, or no one in society is master of his goods".[51] Unlike Le Chapelier he did not invoke "the most sacred, the most legitimate, the most unassailable[...], the most personal of properties"; rather he proclaimed that:

> "Of all rights the least subject to criticism, a right whose increase can neither harm republican equality, nor offend liberty, it is without question the property right on creations of genius."[52]

There is no conviction of the centrality of authors' personal claims in Lakanal's rhetoric. Confusion over this issue can be found among many leading writers by removal of the unsettling passage which claims that authors' exclusive property does not harm the Republic.[53] Republican equality has freed authors from the yoke of privileges and censorship. To attribute them another copyright-privilege under the cover of a natural right would be against that equality. Recognition of authors' intellectual property is required since he "devotes his wakefulness to the education of his fellow citizens".[54] Moreover, certain requirements were to be necessary in order to gain protection. Early court decisions under the 1793 law held that deposit of copies

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[51] [Prager, 1944], at 754

[52] "De toutes les propriétés, la moins susceptible de contestation, celle dont l'accroissement ne peut ni blesser l'égalité républicaine, ni donner d'ombrage à la liberté, c'est sans contredit celle des productions du génie, c'est qu'il ait fallu reconnaître cette propriété, assurer son libre exercice par une loi positive, c'est qu'une aussi grande révolution que la nôtre ait été nécessaire pour nous ramener sur ce point, comme sur tant d'autres, aux simples éléments de la justice la plus commune", [Lakanal, 1793]

[53] "La loi du 19 juillet 1793 consacre le droit de reproduction : elle est votée sur le rapport de Lakanal qui n'exprime pas une idée différente de celle de Le Chapelier lorsqu'il écrit : << de toutes les propriétés, la moins susceptible de contestation, c'est sans contredit celle des productions du génie; et quelque chose doit étonner, c'est qu'il eut fallu reconnaître cette propriété, assurer son exercice par une loi positive >>.", [Colombet, 1994], at 5; see also Eugène Pouillet, *Traité théorique et pratique de la propriété littéraire et artistique*, Tome 1 (Paris, 1908), at 14-15.

[54] "Par quelle fatalité faudrait-il que l'homme de génie, qui consacre ses veilles à l'instruction de ses concitoyens, n'eût à se promettre qu'une gloire stérile, et ne pût revendiquer le tribut légitime d'un si noble travail", [Lakanal, 1793]

not only met a procedural requirement but also gave rise to copyright protection.[55] Failure to do so resulted in the fall of the work into the public domain. All these rulings suggest a judicial view that the act of authorship did not itself afford a basis for recognizing or maintaining protection of authors' right. Also, the right vested in authors themselves curiously appeared to be called the "public property right" to confirm, in my opinion, that exclusive rights in published publications were an exception; ultimately they belonged to the public. The law did not recognise the author's claim beyond his lifetime but established the notion that the only heir to authors' works was the nation as a whole. Consequently, rights of authors in published works were a reward for their service as an agent of enlightenment through the publication of their ideas. Authors' position moved from a privileged agent of the absolutist police state to an egalitarian servant of public enlightenment as a result of political negotiation.

Moreover, the 1793 laws sought to promote dissemination of productions of the beaux arts and letters.[56] The law was intended then to promote works of information and education as well as the arts and letters, similar in spirit to the Consitution of the newly emancipated United States of America.[57] Nonetheless, since

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[55] The court held that it was "formal" and clear" that "the author of a work acquires the public property right in it by conforming formalities", Judgment of 23 October 1806, Cass. crim., [1808], 2 Recueil General des Lois et des Arrets 1.300; the Cour de Cassation held that the 1793 law "guarantees literary property, upon condition of deposit of two copies with the Bibliothèque Nationale" and refers to the "loss of that property right through failure of deposit", Judgment 1 March 1834, Ch. crim., [1834] Recueil General des Lois et des Arrets 1.75.

[56] "Les auteurs d'écrits en tout genre, les compositeurs de musique, les peintres et dessinateurs que feront graver des tableaux ou dessins" Art 1, Law of 19 July 1793.

[57] Constitutional Convention concerning copyright submitted a document to the Committee of Detail in August 18, 1787, "To secure to literary authors their copy rights for a limited time. To encourage by proper premiums and provisions the advancement of useful knowledge and discoveries"; 1 Document Illustrative of the Formation of the Union, H.R. Doc. No. 398, 69th Congress, 1st Session 130 (1927), cited in Fenning, *The Origin of the Patent and Copyright Clause of the Constitution*, 17 Geogia Law Journal 1929, at 119.

the book trade in France encountered difficulties, the revolutionary regime took the initiative to invest directly in the trade. Villebrune, director of the Bibliothèque Nationale, argued that such intervention did not break from the revolutionary principles based upon freedom of commerce, of expression and the press where the mercantile interests of the publisher did not coincide with the national interest and it became necessary for the government to intervene in the publishing world".[58] As result, "prohibition of works contrary to the republican principles is indispensable".[59] Consequently intervention became twofold. The government encouraged publishers in the production of the beaux arts and letters not contrary to republican values, and patronised republican publications. However, the government selectively encouraged utility instead of works of higher arts and letters. Revolutionary France saw art, or some kinds of art, as worth protecting in the service of utility.[60] A prosecutor, for intance, complaining about the inadequate enforcement of dramatists' rights, reported:

> "Shall literary properties be less sacred in the eyes of the republican judge than other properties? It is to the wise men, to dramatic authors, to all literary authors that we principally owe the uncontested superiority of the French language over all the languages of Europe. It is they who render all nations tributaries to our arts, tastes, genius, glory; it is through them that the principles and rules of a wise and generous liberty penetrate beyond our borders and sphere of activity."[61]

According to Jane Ginsburg a review of *droit d'auteur* infringement actions and decisions, under the law of 1793 through 1814, shows that the main subject matter concerned informational works, then works of drama, music, art, poetry, or fiction.[62]

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[58] Lefebvre de Villebrune, "Considérations sur le commerce de la librairie française" March 19, 1794, in ed. Guillame, *Procèces-verbaux*, vol. 3, at 614, cited in [Hesse, 1993 (a)], at 68.

[59] Lefebvre de Villebrune, "Considérations sur le commerce de la librairie française" March 19, 1794, in ed. Guillame, *Procèces-verbaux*, vol. 3, at 614, cited in [Hesse, 1993 (a)], at 69.

[60] Not all forms of literary expression received revolutionary approbation. Novels apparently were considered retrograde and useless, Judgment of 21 nov. an7, 2 Revue International du Droit d'Auteur 1954, at 99

[61] Judgment of 21 Nov. An 7, *ibid*

[62] [Ginsburg, 1990], at 1016.

It should be stressed, however, that it is difficult to distinguish between works of information and of art since both may entertain as well as educate according to republican standards. Moreover, the point that needs to be made is whether or not the principles elaborated in July 1793 are unworkable or their application in the law is faulty.

In answering that question, it is of interest to consider the effects of the 1793 law from the point of view of the trade. According to a survey conducted in early 1800, publishers testified unanimously that the underlying and persistent problem for commercial publishing was the law of 1793. Such straightforwardness needs to be put in perspective. On the one hand the civil, revolutionary and expansionary wars in the late eighteenth century had a direct influence on the trade. Also, other laws separate from the 1793 decree, prohibiting the export of books and the repressing laws of December 1792 and March 1793, the latter called "law of suspect", had a dramatic effect on the printing and publishing communities.[63] On the other hand, upon the assumption that printers and publishers initiated the demand, the transition from former aristocratic markets to the new moral republican ones took time. Monsieur Lamy, a publisher in Paris, analysed figuratively the question of literary property and decay of the trade upon that view:

> "In 1793 the law which came to regulate us destroyed the foundations of literary property. It resulted in the undoing of the premier publishing houses and in universal disorder. Immorality supplanted the good faith of yore."[64]

Was the law of 1793 on the rights of the genius harmful? The results of the survey conducted in late *Consulat* and early Imperial periods showed that in fact most

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[63] [Hesse, 1993 (a)], at 64.

[64] Archives Nationales, F 18, carton 11A, plaque 1, Lamy, publisher in Paris, May 8, 1810, cited in [Hesse, 1993 (a)], at 71.

publishers had survived.[65] Also, bankruptcy was often triggered not by piracies or lack of markets but simply by abuse of credit and credibility within the old corporate structure.[66] Nonetheless, it can be affirmed that the provisions of 1793 law were both legally and institutionally inadequate in promoting the principles enunciated in 1793 and consequently as a means to protect the book trade. Printers and publishers complained against pirating editions and high competition in public domain publishing. The text of the decree itself did not require formal deposit the National Library even though the courts made it obligatory as a proof of literary property. Moreover, proceedings were not quick enough to prevent illegal publications reaching the market, and gave time to the pirate to get rid of compromising printed copies. Furthermore, the newly created public domain was left open to abuses, since "the public does not even benefit, because the editions are truncated, inexact and poorly executed".[67] As a result, social progress was forfeited since there was no effective mechanism to monitor the trade. The fundamental dilemma of commercial publishing under the *République* was that the trade did not receive enough support from the state in a totally free market. Being unable to fulfill the Republic's aspirations, the government had to subsidise itself the market. I would like to stress that the mechanism protecting literary property set up in 1793 was inadequate in easing publishing markets, and consequently inadequate in consecrating the fundamental revolutionary principles. For instance, the term of protection limited to ten years after the death of the authors may have been too short in motivating publishing companies

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[65] footnote 42, in [Hesse, 1993 (a)], at 77.

[66] [Hesse, 1993 (b)], at 76.

[67] Archives Nationales, F 18, carton 11A, plaque 1, report from Briand, Paris publisher, cited in [Hesse, 1993 (a)], at 72.

to invest in the new productions, since it reduced the commercial value of new books. More importantly, competition practices over work in the public domain was unjust and damaging to society as a whole in considering the quality of works produced. Realism forced the young Republic to elaborate more thoughtfully on the *laissez faire* idealism of 1789 and its law on literary property.

The French *droit d'auteur* initiated a liberal policy based upon a legal synthesis which combines an instrumentalist notion of the public good with a theory of authorship based upon natural justice consecrating the public domain. I would point out that this instrumental policy differs from its British counterpart, since it is the public domain which evolves or motivates the recognition of literary property vested in authors. Authors are the instrument of a general policy and are rewarded for their efforts and genius. Such progress is believed to occur through access and exchange of ideas, which can be supported by liberal states founded on conflict and negotiation, not like an absolutist state grounded on police measures. French revolutionary texts, foundations of the current French *droit d'auteur*, expressed mixed protective motives, emphasising the rights of man in their essence as authors, who ultimately, are an integral part of a community and draw their creativity from that community. This unstable and liberal legal synthesis establishes a public domain based upon authorship laws, which shifts "the problem of determining the meaning of the text away from its source, the author, and toward its destination, its representation and reception by the editor and reader."[68] As a result there is an integral effort to accommodate individual interests, in other words, an effort to distribute resources within society whereby

[68] [Hesse, 1990], at 131.

authors as sources of ideas do not exclude other individuals from these resources. Clearly, this demonstrates that there is a complex relationship between the law, society and cultural change which requires an adequate definition of what is an author, or authorship, in order to achieve these goals. Revolutionary acts chose not to grant exclusive rights to authors on the sole aspect of natural justice. They could only secure or recognise such rights. The current of Enlightenment thought objected to the sole instrumentalist grounds which asserted exclusive property rights on commodities. As Condorcet argued, exclusive individual property claims would retard the progress of knowledge, opposing freedom of expression not only with censorship but also copyright.[69] Literary property can be analogised to real property as advocated by Louis d'Héricourt. Condorcet challenged that point of view. Asserting the public good nature of information, he argued that a field may belong to only one person; by contrast, a literary work can belong to and be enjoyed by many simultaneously. Social intervention was believed to be needed to create and secure a property interest in such works. Therefore, if society is to intervene, the creation of a privilege must be necessary, useful, and just. Condorcet concluded that authors' and publishers' privileges were none of these in 1776. They concentrated power over books and ideas in a few hands rather than disseminate knowledge. He concluded that rights in literary works diminished rather than enhanced public debate.[70]

Accordingly intellectual property stems from revolutionary dialectics. In suppressing privileges, printers' and publishers' guilds collapsed concomitantly but did

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[69] Condorcet, *Fragments sur la liberté de la presse*, in 11 Oeuvres de Condorcet (Paris, 1887), at 308-11.

[70] *ibid*, at 311.

not produce the expected increase in intellectual creations.[71] Revolutionary thinkers and legislators had to deal with this crisis in ideas and letters. As Lakanal argued, recognition of authors' exclusive rights became a necessity in order to perpetuate and further revolutionary ideals. The principle of public domain reflecting the liberal approach of *laissez faire* could not sustain itself. Temporary exclusive rights had to be introduced in order to further enlightenment. Along these lines of thinking, Condorcet himself collaborated with the Abbe Sieyes and participated the formulation of the 1793 law. He recognised that :

> "the progress of the enlightenment, and thus of the public good, join themselves to the ideas of distributive justice, to require that the law assure to author property right in their works."[72]

The public domain as a principle of copyright accepted by Condorcet and Sieyes became a necessary and useful solution that in practice had proved delicate to apply. What was sought was not the individual exchange of ideas among a limited circle but an enlarged place for exchange, requiring social negotiation as a principle of social progress. Under this view, a just copyright law should be no more extensive than required to promote the public welfare. Therefore, the introduction of instrumentaliststheories, and as such exclusive proprietary rights, adequately promoted revolutionary ideas as long as public motives were driving forces. Such legislation expressed the suspicion of the legislator towards proprietary rights in works of authorship both as a matter of Enlightenment theory and anticorporatism.[73] Proprietary right was perceived as a vehicle to foster the public welfare. However, the

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[71] Carla Hesse, *Res Publicata: The Printed Word in Paris 1789-1810*, dissertation cited by [Ginsburg, 1990], at 995.

[72] 4 Histoire Parlementaire de la Revolution Française (Paris, 1834), at 282.

[73] [Ginsburg, 1990], at 1014.

whole body of principle could work only if exclusive rights were secured and not granted. because the public domain also stems from natural justice. In granting an exclusive right, legislators would in fact have introduced a privilege which would have the balancing force of the public domain simply because private forces could have used the force of intellectual property rights to claim exclusive rights over ideas. Also, the system is technology neutral since rights of authors are enforceable upon the theory of intellectual property and upon a commodity. The French legislator resolved the public-versus-private tension by casting primarily as an aid to the advancement of public instruction the protection of works of the mind, asserting the principle of public domain and its corollary, a personal right vested in authors.

## THE DILEMMAS OF AMERICAN REVOLUTIONARY LITERARY PROPERTY

In America, copyright was the subject of almost immediate legislation as soon as the new nation was founded. In fact, colonial America had not secured as such any form of protection covering publications. Nonetheless, contrary to common opinion, the General Court for elections of the Massachussets Bay Colony issued an order in 1672 granting the exclusive right to print, publish and sell a revised version of its public laws to John Usher.[74] The laws of Great Britain applied throughout its empire; however, Connecticut, Massachussets, and Maryland had already enacted

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[74] "In ansr to the petition of John Vsher, the Court judgeth it meete to order, & be it by this Court ordered & enacted, that no printer shall print any more coppies then are agreed & pajd for by the ouner of the sajd coppie or coppies, nor shall he nor any other reprint or make sale of any of the same, without the sajd ouners consent, vpon the forfeiture and peonalty of treble the whole charges of printing, & paper &c., of the whole quantity payd for by the ouner of the coppie, to the sajd ouner of the coppie, to the said ouner or his assignes", 4 records of the Governor and Company of the Massachussets Bay in New England, part 2 at 527, cited in Francine Crawford, *Pre-Constitutional Copuyright Statutes*, 23 Bulletin,Copyright of the U.S.A. 1975, at 11, Hereafter: [Crawford, 1975]

comprehensive copyright statutes, under the influence among others of Jeremy Belnap and Noah Webster[75], when the Congress of the Federation passed a resolution on 2 May 1783:

> "recommend[ing] to the several States to secure to the authors or publishers of new books not hitherto printed, being citizens of the United States, and to their executors, administrators, and assigns, the copy right of such books for a certain time not less than fourteen years from the first publication ... such copy or exclusive right of printing, publishing and vending the same, to be secured to the original authors, or publishers, their executors, adminstrators, and assigns, by such laws and under such restrictions as to the several Sates may seem proper."[76]

Importance was given to the cultural heritage of the young nation for the first time. Accordingly, twelve states had secured to authors or publishers copyright protection before the enactment of the Constitution of the United States of America in July 1787 and the first federal copyright act passed by Congress in 1790.

An analysis of the states' copyright statutes shows that they were either designed after the Statute of Anne or took different patterns.[77] On the one hand, the statutes which contain a preamble assert exclusive rights in authors to secure profits in their works even though the resolution recommended states to secure to authors, or publishers alike, copyright protection. Also, the concept of encouragement of learning and scholarship was predominant in most preambles.[78] Such affirmations would suppose that legislators had been aware of theories putting forward the natural rights of authors in their work since they had a clear choice between authors or publishers. Also, the reason for securing author's rights was consistent with the aim of

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[75] Noah Webster, *Origin of the Copy-Right Laws in the United States*, in *Collection of Papers on Political, Literary and Moral Subjects*, (New York, 1843), at 174.

[76] *Journals of the United Sates in Congress Assembled*, Containing the Proceedings from Nov. 1782, to Nov. 1783, at 256-257, cited in [Crawford, 1975], at 13.

[77] Lyman R. Paterson, *Copyright in Historical Perspective*, (Vanderbilt University Press, 1968), at 184, Hereafter: [Paterson, 1968]

[78] [Crawford, 1975], at 14-16

encouraging authors to create for the greater benefit of society. On the other hand, the statutes established a government grant of economic rights limited in time in order to prevent a monopoly for the benefit of society. Like the Statute of Anne, the states' copyright statutes protected works solely as commodities in giving authors exclusive rights limited in time in printing, publishing, and selling their works. As a result, authors as well as their assigns had to fulfil certain requirements such as depositing a copy in order to gain copyright. Furthermore, a majority of statutes required authors to be citizens or residents of their state. Therefore, state statutes were not consistent with the principles of natural justice. However, this can be explained rationally. As long as the idea of copyright as a right vested in authors upon the principle of natural justice predominated, copyright could be analysed as a system composed of two bodies of laws. One was formed by a statutory law of copyright, preventing monopolies on commodities, and another a common law of literary property as a recourse to protect possible rights not provided for in the statute. I would simply stress that the statutes represent a transitional step between instrumentalist copyright mechanisms and natural right copyright ones. It is of importance to bare in mind that this ill-defined system was never tested in the courts but it most certainly influenced Congress in the drafting of the first federal copyright act.

In recommending states to secure copyright statutes, the Congress of the Federation did not impose any uniformity of form from the states. As a result, copyright statutes differed in their principles and provisions in each state. Seeking uniformity in copyright protection, as opposed to separate effectual provisions[79], in

[79] "States cannot separately make effectual provision for either [copyright or patents]", The Federalist, No. XLIII at 267, cited in [Crawford, 1975], at 36.

order to correct the narrowness and unenforceability of certain provisions the Fathers of the Constitution debated and proposed different animating principles in provision to a future federal copyright system. For instance, James Madison proposed the following goals for future federal copyright law:

> "To secure to literary authors their copyrights for a limited time. To establish a university. To encourage, by premiums and provisions, the advancement of useful knowledges and discoveries"[80]

His principles recognise exclusive but limited property rights vested in authors, a "university", or the need for a public domain, and the need to encourage the advancement of knowledge and inventions. It is difficult to ascertain whether or not Madison intended to put a certain consequential order to his principles. However, all the principles are based upon the premise of natural justice. More importantly, the final product formed clause 8 of the Constitution of the United States of America which was approved on 5 September 1787. The Constitution empowers Congress:

> "To promote the Progress of Science and the useful Arts, by securing for limited Times to Authors and Inventors, the exclusive Right to their Writings and Discoveries"[81]

This constitutional mandate establishes the very principles on which Congress has to legislate. I would like to insist on the fact that the clause is fully integrated in the Constitution, the supreme body of law which formally states people's rights and duties according to the animating principles and aspirations which gives purpose and direction to a nation. Congress has then the duty and the right to secure provisions giving for a limited time exclusive rights to authors in their writings.

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[80] V. Elliot, *Debates on the Adoption of the Federal Constitution*, 2nd ed. (1836), at 440, cited in [Paterson, 1968], at 192.

[81] Article I, § 8 cl. 8, U.S. Consitution

Moreover, it is significant to observe that the clause is a reflection of the European enlightenment, which "fought for the legal recognition of natural rights and for the elimination of institutions and practices associated with the *ancien régime*".[82] This evidently set the tone and the importance attached to the formulation of the clause. Fundamentally, Congress was entrusted with the right and duty to ensure the advancement of the nation's cultural and scientific heritage. To that effect, Congress might set adequate mechanisms in the form of limited exclusive property rights, and not monopoly-privileges. Clause 8 entrusts Congress to "secure", in other words to recognise, all rights pertaining to authors and not to grant solely an economic monopoly by contrast to the Statute of Anne. As a result, the U.S. Consitution takes a liberal approach similar to the later enacted French *droit d'auteur*. Rights of creators in their work are recognised as an inescapable natural right which in effect is shifted from individual claims to the overall claim of a nation to its scientific and cultural heritage. Consequently, such exclusive claims cannot be of any harm since their purpose is to further the public domain. As early as 1782, Reverend Samuel Smith, professor of theology in Nassau Hall, expressed that opinion in a letter defending "copy-right laws". He wrote:

> "And it is my opinion that it can be of no evil consequence to the state, and may be of benefit to it, to vest by a law, the sole right of publishing and vending such works in the authors of them."[83]

Interestingly, his remark seemed to have found an echo in the report given by Lakanal in July 1793 to the French National Assembly in support to the *déclaration des droits*

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[82] Bernard Bailyn, *The Ideological Origins of the American Revolution*, (Harvard University Press, 1992), at 27.

[83] Samuel S. Smith, Princeton, Sept. 27, 1782, letter to Noah Webster, in N. Webster, *Origin of the Copy-Right Laws in the United States in a Collection of Papers on Politival, Literary and Moral Subjects*, (New York, 1843), at 174

*du génie*. The danger of monopolies is prevented by the intent of the clause, which is the furtherance of the public domain: Congress is to secure "for limited Times to Authors and Inventors" exclusive rights in their work. Furthermore, recognition of both "Authors'" and "Inventors'" exclusive but limited rights supports the self-evident recognition of their economic interests as an aid to promote learning. Also, the formulation of the clause, unlike the states' copyright statute preambles, has with consistency established natural justice principles, breaking away from the simple grant of privileges to investors. In sum, I would maintain that the constitutional mandate in asserting "the sovereign's interest in promoting a socially desirable end" is fully consistent with the recognition of the right of authors and inventors in their works, in other words in their intellectual property.[84]

On 31 May 1790 Congress passed the first federal copyright act entitled "An Act for the encouragement of learning, by securing the copies of maps, charts, and books, to the authors and proprietors of such copies, during the times therein mentioned."[85] Benjamin Kaplan admitted that clause 8 is a "means of releasing the energies of creative workers" and without any surprise analogised the first federal copyright Act with the Statute of Anne.[86] The fact of the matter is that Congress in misunderstanding clause 8 has hampered the transition from the constitutional principles into their embodiment in law. In order to clear the ground, I would like to

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[84] By contrast, DaSilva opposes that view claiming "The contitutional mandate receals that American copyright arises not fom a perpetual, natural right of "propriété incorporelle," as in france, nor even from a "right of personality," as in Germany, but rather from the sovereign's interest in promoting a socially desirable end", DaSilva, *Droit Moral and Amoral Copyright: Artists' Rights in France and the U.S.*, 28 Bulletin, Copyright Society of the U.S.A. 1980 ,at 55.

[85] ch. 15, 1 Sta. 124.

[86] Benjamin Kaplan, *An Unhurried View of Copyright*, (Columbia University Press, 1967), at 25, Hereafter: [Kaplan, 1967]

draw a parallel between the former states' copyright statutes and the final congressional product. Undoubtedly these statutes seem to have had an influence on Congress in drafting the federal copyright act, and its subsequent versions. Francine Crawford has even argued that the act is:

> "a direct descendent of the 1783 Connecticut statute, and elements in the national statute can be traced back as far as the 1672 Massachusetts Bay Colony order."[87]

According to its title the Act intends to secure exclusive rights to Authors for the purpose of encouraging learning. As such the principles of limited monopoly, public domain, and authors' rights would reflect the constitutional clause. Nevertheless, a study of the provisions of the act shows that Congress did not respond adequately to the three principles. Not only do seven sections of the act follow a similar pattern to the Statute of Anne, but it develops provisions solely for the attribution of a literary privilege. For instance, section 1 provides for two copyrights in published and future publications of selective commodities: maps, charts, and books. Correspondingly, the exclusive rights of printing, reprinting, and publishing are vested in their authors unless attributed to third parties. The granted monopoly is limited to fourteen years, a term renewable if the author and proprietor or his assign were still living. Also, it has to be noted that only citizens or residents of the United States will receive copyright protection. Section 2 explains more clearly the purpose of the Act, which is to protect works from piracy. Copyright is then deemed to be a right to which a work is subject. Correspondingly, section 3 requires that certain formalities are fulfilled. The act itself recalls the former states' copyright satutes. Furthermore, the tone of the act betrays the constitutional provisions, and also opposes the vision of the Constitution and the Bill

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[87] [Crawford, 1975], at 36.

of Rights "that declared the people's "unalienable and fundamental rights in such a way as to set limits to the power of government and to serve as an alarm when legislators and rulers overreached their proper bounds."[88] Congress contravened its duty in the sense that it established a purely literary privilege to authors instead of securing solely an exclusive right limited in time for the greater benefit of society. There is no reliance on the natural rights of authors. Possibly, Congress being influenced by the states' copyright statutes wanted to retain a distinction between common law rights in unpublished works and statutory rights in published works. The first reported federal copyright case, *Morse v. Reid*, in 1798 would confirm that point where the act provided solely remedies for infringement and lacked any provisions for the moral right of authors.[89] Nonetheless, by the simple fact that courts refer to both the Act and the constitutional provisions, the discrepancies make the act impossible to apply with consistency "leading to open abuses".[90]

Above all the most direct abuse which pervades such a system is that copyright ceases to be limited in scope and becomes the entire property interest of the copyright owner in his works after publication. The fundamental question remains whether American copyright is an author's right in its own right or a creation of statute which prevents monopoly. Today some argue that the most recent acts fail to fulfill

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[88] Bernard Bailyn, *The Ideological Origins of the American Revolution*, (Harvard University Press, 1992), at 351.

[89] *Morse v. Reid* was decided in the U.S. Circuit Court for the District of New York on April 4 and 6 1798, see John D. Jordan III, *Morse v. Reid: The First Reported Federal Copyright Case*, 11 Law and History Review 1993, at 34-37.

[90] "The laws as they stand fail to give the protection required, are difficult of interpretation, application, and administration, leading, to misappropriation and misunderstanding, and in some directions are open to abuses", *Copyright in Congress 1789-1904*, U.S. Copyright Office Bulletin n°. 8 (1904), at 7.

the constitutional principles. Commenting on a recent Supreme Court decision, Eileen Selsky declared:

> "The U.S. Supreme Court, in *Sony Corporation of America v. Universal City Studios, Inc.*, declined a prime time opportunity to affirm the value of copyright protection in enriching the exchange of ideas and the expression of information in our society."[91]

Answers to the overall question can be found in *Henry Wheaton and Robert Donaldson v. Richard Peters and John Grigg*, the American counterpart to *Donaldson v. Becket*.[92] The circuit court dealt with the special claim that Wheaton failed to deliver to the Secretary of State a copy of the book within six months of its publication as required by the fourth section of the Act of 1790.[93] Judge Hopkinson concluded that such delivery was essential to secure a copyright. As such, he held that copyright was a privilege and not a right, since copyright is a grant from government. Moreover, Judge Hopkinson held that:

> "The public, the citizens of a community, acting by their representatives, confer upon an author certain privileges or rights for his exclusive benefit; and to protect him in the enjoyment of them, they impose certain penalties or give certain remedies against any person who shall violate these rights. But some protection is due on the other side, that innocent and ignorant invaders of the privilege may not be involved in suits and penalties, by the want to accessible means of information of the subject and extent of the grant."[94]

Consequently, any claim of copyright at common law was to be inconsistent with the passing of the Act which grant a privilege to authors. Furthermore, he observed that there was no federal common law.[95] In my opinion, that strengthens the assumption that copyright system could be formed by two systems, a statutory and a common law

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[91] Eileen L. Selsky, *Is Copyright a Property Right or a Creation of Statute?*, 2 Entertainment & Sports Lawyer 1984, at 14.

[92] *Wheaton v. Peters*, 33 U.S. (8 Pet.) (1834), at 591.

[93] *Wheaton v. Perters*, 29 Fed. Cas. (C.C.E.D. Pa. 1832), at 862

[94] *ibid*, at 867.

[95] "It is clear, there can be no common law of the the United States. The federal government is composed of twenty-four sovereign and independent states; each of which may have its own usages, customs and common law. [...] The common law could be made part of our federal system, only by legislative adoption", *Wheaton v. Peters*, 33 U.S. (8 Pet.) (1834), at 658.

copyright. Wheaton appealed to the Supreme Court. In 1834 the Justices held by a majority of four to two that opinions of the Court could not be subject to copyright. Nevertheless, "marginal notes, or syllabus of the cases and points decided, the abstract of the record and evidence, and the index to the several volumes" were subject to copyright.[96] On the one hand, the judges made the point that no federal common law copyright existed. On the question whether common law copyright existed in England, the dissenting judges argued that it existed. The majority held that no common law copyright existed in each state but also that only the Federal State provided to that effect under the form of a grant from government. On the other hand, the majority held that all requirements for securing copyright were to be fullfilled, or mandatiry, and not merely directory. As regards the decision of the circuit court whether Wheaton had complied with the requirements, the Court remanded the case for a determination of fact by a jury, since the Justices were not satisfied with the circuits court findings. Finally, the decision established the American concept of copyright as a statutory grant of a monopoly for the benefit of the author. It would appear then that even the Supreme Court misunderstood the principles enunciated in the constitutional mandate.

It is important to look at the arguments advanced by different Justices. On the one hand, Justice McLean, writing on behalf of the majority, based his argumentation upon the premise that copyright is a monopoly in nature. They agreed that authors have at common law a property right, preventing anybody from publishing their manuscript; however, they observed that it was a very different right once the

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[96] *ibid*, at 698.

manuscript has been published.[97] Accordingly, the Justices objected to the underlying notion that authors hold a perpetual copyright on ideas. They observed that the value of a book lies in its content, and the question arises as whether any buyer is allowed to print content that freely. McLean concluded that Congress, in recognising the economic interests of authors in the value of books, "by this act, instead of sanctioning an existing right, as contended for, created it."[98] He consequently adopted a stout approach to the requirements for securing copyright. Deposit of a title of the work in the clerk's office of the district court and publication of the clerk's record in the book were required. Nonetheless, subsequent conditions such as public notice in the newspapers and deposit of a copy of the book with the Secretary of State were "important, the law requires them to be performed, and, consequently, their performance is essential to perfect the title".[99] On the other hand, Justice Thompson, as one of the two dissenting voices, contended that:

> "The great principle on which the author's right rests, is that it is the fruit of his own labor, which may, by the labor of the faculties of the mind, establish a right of property, as well as by the faculties of the body; and it is difficult to perceive any well-founded objection to such a claim of right"[100]

He advocates clearly that an author is entitled to the property of his labour as a matter of natural justice. Justice Thompson argued then that common law copyright existed. However, he added that literary property:

> "seems founded upon the same principle of general utility to society, which is the basis of all other moral rights and obligations. Thus considered, an author's copyright

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[97] *ibid*, at 658.

[98] "The Congress, in passing the Act of 1970, did not legislate in reference to existing rights, appears clear from the provision that the author, &., "shall have the sole right and liberty of printing," &c. Now if this is exclusive right existed at common law, and Congress were about to adopt legislative provisions for its protection, would they have used this language? Could they have deemed it necessary to vest a right already vested? Such a presumption is refute by the words above quoted, and their force is not lessened by any other part of the act.", *ibid*, at 660-661.

[99] *ibid*, at 665.

[100] *ibid*, at 669-670.

> ought to be esteemed an invaluable right, established in sound reason and abstract morality."[101]

Therefore, Justice Thompson considered that author's rights are not a creation of Congress but a simple recognition for the "general utility to society". Nonetheless, he did not pursue the argument further. He saw the statutory provisions only as an additional protection. Here, as well as dissenting, Justice Henry Baldwin argues that Congress intended only to limit the common law right of authors but afforded authors with additional security. As Justice Baldwin observed:

> "So far from any act of Congress having impaired this common-law right, they seem to me to recognize its existence, and to have been intended to afford it additional security."[102]

In sum, the justices approached the issue from two sides. The majority analysed the Copyright Act as a means to afford protection to authors and the creation of a limited monopoly. The dissenting Justices viewed copyright as a recognition of author's rights, affording additional but limited protection. Moreover, both sides argued in their own way about how Congress intended to balance authors' individual claims and the public's interest but in an uneasy manner.

Successive copyright laws have revised the original Copyright Law of 1790, but discontent has always emerged about the applicability of the text. Justice Joseph Story argued that it was not possible to "lay down any general principles applicable" to copyright cases.[103] In my own opinion, courts simply cannot produce consistent decisions because the Act prevents it, since Congress has not succeeded in translating into law the principles enunciated in clause 8. In response to Eileen Selsky, I venture

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101 *ibid*, at 671.

102 *ibid*, at 698.

103 *Folsom v. Marsh*, 9 Fed. Cas. (C.C.D. Mass. 1841), at 344, cited in [Paterson, 1968], at 213.

to say that it is true that the Supreme Court has failed to correct the discrepancy. Nonetheless, it is more significant to observe that the causes of the problem have never been defined correctly.[104] On the one hand, exclusive property right is a necessary monopoly which is intended to provide financial reward to authors. However, Congress did not conceive that a literary monopoly is a legal confirmation of natural rights, balanced in effect by society's natural rights to access information. Both rights cannot be privileged ones. If that happens, an imbalance occurs which distorts the system of exchange of information resources. On the other hand, the situation has created a dilemma for Congress, as well as the Supreme Court, since they could not detach their mind from the effects of monopoly which has prevented them from conceptualising intellectual property.[105] Moreover, Congress has simply granted privileges to copyright owners giving in effect an appearance of control. As a result, Congress has tried to apply to a mechanism fit for two variables, monopoly rights over a commodity and public interest, a third variable, authors' rights. Fear of monopoly along with the necessary expansion of authors' recognised rights under the law, economic as well as moral rights but socially required for the benefit of society, have been possible key factors in the creation of the legal situation. The idea that copyright was an objectionable monopoly was a difficult one to maintain in absence of any means of control. Congress in a reassuring move granted privileges as a means of control at the expense of the idea of author's right protecting his natural rights.

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[104] Eileen L. Selsky, *Is Copyright a Property Right or a Creation of Statute?*, 2 Entertainment & Sports Lawyer 1984, at 14.

[105] [Paterson, 1968], at 215.

Important implications can be drawn from that unstable situation. In advocating author's rights, in a system which in effect does not recognise them, the role of the publisher is eradicated in a law designed in fact to control economic transactions over a commodity, and therefore the publisher's interests. It is assumed that the publisher's right to control the commodity derives from the author, as it should be under a true author's right copyright system. In fact, the right comes from Congress, not from authors, since it grants a limited monopoly providing limited economic rights to authors. Problems arise since authors advocate their natural economic rights based upon a system which protects monopoly rights over commodities. Economic controls not only allow control over the economic commodity but also state control over the publication. The concept of public interest is possibly limited to what the state, or publishers, wish the public to be informed about. As a result, copyright ceases to be limited in scope, to distort a system designed only for appropriable commodities. Consequently, claimants for copyright protection tend to extend their rights over the domain of ideas which either under a normal instrumentalist or a natural right system would be prevented under the principle of public domain. Natural rights or authors' rights have become an easy extension of monopolistic rights over works, simply in shifting the right to access to ideas from the public to private individuals. Moreover, an instrumentalist copyright mechanism can only be sustained in a defined technological environment such as printing or any other technology which embodies works in material forms. Information technology changes the technological deal and facilitates the game of individuals claiming private

monopolistic rights over ideas, since an intrumentalist system cannot enforce the public domain principle.

### DROIT MORAL *V.* MORAL RIGHTS

The French *droit d'auteur* involves a second element: the *droit moral*. Moral rights have no basis originally in any code. They ares the outcome of decisions handed down by French high courts and tribunals since the middle of last century.[106] They include non-property attributes of an intellectual and moral character which give legal protection to the intimate bond which exists between a literary or artistic work and its author's personality. The intention is to protect moral integrity as well as economic return.[107] It has been submitted that Anglo-American court solutions applying the theory of torts in cases involving defamation, unfair competition, or injury to the rights of the individual, obtain results analogous to those which derive from the application of the French theory of the moral right.[108] These solutions are what Professor Kaplan has called "forms of protection cognate to copyright" that have grown up in an unprincipled way outside the statute.[109] Common law equivalents reflect, in my opinion, a certain scepticism towards the author who failed to look after the integrity of his work, as opposed to the French concept, which is composed of a framework of rights based upon definite principles. The moral right involves the right

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106 Raymond Sarraute, *Current Theory on the Moral Right of Authors and Artists Under French Law*, 16 The American Journal of Comparative Law 1968, at 465.

107 "Le droit moral est le droit pour l'auteur de creer, de presenter ou non sa creation au public sous une forme de son choix, de disposer de cette forme souverainement et d'exiger de tout le monde le respect de sa personalite en tant qu'elle est liee a sa qualite d'auteur", [Nouaros, 1935], at 68.

108 William Strauss, *Les substituts du droit moral en droit américain,* Droit d'auteur, 1955, at 173-185.

109 [Kaplan, 1967], at 79, 88-89.

of disclosure, the right to withdraw or disavow, the right of paternity, and the right of integrity of the work of the mind. Only the creator, or his lawful executors or legatees, can exercise such rights. As a personal right, it cannot be based on any theory of property or whatever property the creator may possess. As a result, unlike the literary and artistic economic property right which is limited in time to fifty years after the author's death, the moral right is perpetual. As a result, once the work has fallen into the public domain moral rights remain except in the case of deceased authors who have no known heirs.[110]

The essential difference from the Anglo-American conception appears to stem from the inalienable, imprescriptible, non-seizable and perpetual nature of the French moral right.[111] Indeed, this principle takes precedence over the enforcement of contracts and may always be invoked by an author or his heirs. The remedy would probably take the form of an injunction against the offending activity, although it should not by any means be so limited. What is essential to understand is that the development of moral rights follows directly from the simple recognition of the author's property rights. As explained, such rights have been recognised in order to further the public domain. Moral rights are personal rights and therefore are not based

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[110] Case of the Society of Men of Letters who asked for an injunction against the use of the title "Les liasons dangereuses" in a film based upon the eighteenth century novel written by Choderlos de Laclos and bearing the same title. A preliminary injunction was granted on grounds of unlawful reproduction which was penal in nature (Trib. civ. Seine, Sept. 25, 1959, Gazette du Palais 1959.2.202; App. Paris, April 4, 1960, Gazette du Palais 1960.1.253).The decision implied then that moral right could be enforced through the criminal law and as a result would have changed completely the case law and the spirit of the 1957 law (Sarraute, Gazette du Palais 1959.1 Doctrine 2; Plaisant, *J.C.P.* 1959.11319; *Contra*, Desbois, D.1960.530 and *Revue Trimestrielle du Droit Comm.*, 1960 at 88). Accordingly, the Court of Appeals and the Court of Cassation ruled that the claim was unacceptable (Decision of Nov. 10, 1961, *d.*1962.116, note Lyon-Caen; Decision of Febr. 19, 1964, Gazette du Palais 1964.1.247, conclusions by Delsangles; Decision of Dec. 6, 1966, Gazette du Palais 1967.1.98).

[111] [Colombet, 1994], at 110-111.

on any theory of property, or whatever property the creator may possess or exist in the rights protected by the copyright statute. The whole doctrine of moral rights puts emphasis upon the personal protection of works of the mind. Moreover, the fundamental reason for the protection of the moral right lies in the need for society to protect the integrity of its cultural heritage. It is believed that authors, and especially heirs or legatees, are better placed than any other person to preserve the integrity of the deceased author. Such powers, however, should not curb the freedom of creativity of individuals. The public has defined interests in preserving its cultural heritage intact, as well as in protecting creators, since it may stimulate their creativity. I would like to stress that creativity is a complex process where financial benefit is certainly not the sole motive. The creator obviously has an interest which is more than a simple economic one. The *droit d'auteur* has accordingly recognised authors as creators and not as inventors, even though it recognises their pecuniary rights. The doctrine of moral rights favours then the creator and the public against the entrepreneur and the performer. The interests of the performer, publisher or entrepreneur are distinctly adverse to the existence of the moral right.[112] Obviously their interest is mainly to derive economic advantage from the created work by strictly ensuring a exclusive commercial security. The *droit d'auteur* attempts to prevent such economic powers from exercising a pressure on authors.

The French moral rights reflect the intimate union between the personality of the author and his work. During the period of creation the moral right concept gives to the author without limitation of time the right to determine when the work has been

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[112] [Nouaros, 1935], at 268.

finally completed.[113] After publication the concept gives to the author the right to have his authorship acknowledged, the right to have the integrity of his work respected and the right in the case of publishing contracts, to withdraw the work. The *droit moral* has come to be understood as the assurance of respect for the work of art, first while it is being created, and second when completed, unveiled, published and sold. These are two distinct periods, separated by the artist's act of disengaging himself from his work and submitting it to the judgement of the public. Until that moment, the work is an expression of the artist's personality and remains his own. No one can claim any right to the work. It could be a rough draft or a completed work, but the artist may modify or destroy it at will. He alone can determine when his plan has been realised, when his work has been completed, and when he feels that he can without injuring his reputation reveal it to the public. Similarly, at common law the right of first publication protects authors from unscrupulous publications wihtout the consent of the author. At common law a work that has not been exploited or published can be withheld from public circulation by the creator or his successors even when the physical property is owned by a third party or even when the physical property is owned by a third party even when the work has been recognised as completed by its author.[114] According to an old American dictum:

> "there is no law which can compel an author to publish. No one can determine this essential matter but the author. His manuscripts, however, cannot without his consent, be seized by his creditors as property;"[115]

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[113] Raymond Sarraute, *Current Theory on the Moral Right of Authors and Artists under French Law*, 16 The American Journal of Comparative Law 1968, at 470-472; [Colombet, 1994], at 112-114.

[114] *Pope v. Curl*, 2 Atk. 342, 26 Eng. Rep. at 608 (Ch. 1741); *Duke of Queensberry v. Shebbeare*, 2 Eden. 329, 28 Eng. Rep. at 924 (Ch. 1758); *Maklin v. Richardson*, 27 Eng. Rep at 451 (Ch. 1770).

[115] *Berry v. Hoffman*, 125 Pa. Super. 261, 189 A.516 (1937); *Eyre v. Higbee*, 22 How. Pra. 198 (N.Y. Sup. Ct. 1861) [Letters of General G. Washington].

Under such circumstances the fundamental right for anyone to create or exercise the right to exercise his creative talent is respected or cannot be denied by statutory provisions.[116] In effect, here there are no major differences between the common law and civil law approaches.

Once the author has made the decision to publish his work, then the work falls under the scope of statutory copyright or *droit d'auteur* in the same way as regards pecuniary rights. By contrast, the right of respect for the integrity of the work, the right of paternity and the right of withdrawal and of modification are applied differently. This difference stems mainly from the four characteristics of the *droit moral*: inalienable, imprescriptible, non-seizable and perpetual. For instance, the inalienability of the French moral rights applies to authors even when the author has purported to surrender his rights by contract. From the time an author has published his work he has the right to insist that the integrity of the work must not be violated by measures which could alter or distort it. Such a claim may conflict with the creative freedom of adapters. For instance, there is a well-known case about a refrigerator which was painted by Bernard Buffet and which was to be auctioned in pieces.[117] The artist brought an action in order to prevent the separate sale of the different panels composing the refrigerator. The court accordingly prevented the sale and awarded also one symbolic new franc to the artist as a form of damages. One can see clearly that adaptation of a work needs the unconditional authorisation of its creator in order to proceed. Libel law may provide some ground for the prevention of deformation of the

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116 [Nouaros, 1935], at 183.

117 John H. Merryman, *The Refrigerator of Bernard Buffet*, 27 Hastings Law Journal 1976, at 1023.

body of the work as well as the title of the work. However, it may be difficult to apply since the copyright owner, who may not be the author, would need to exercise a personal right. Moral rights are intended to protect creators' personality and not their proprietary rights. To that respect, protecting the accuracy of a text may be as important for the publisher as for the author ; however, the statutory term of protection limit in time possible action. Also, the concept of libel may have to be strained beyond breaking point in order to protect creators of non-literary works and to prevent deformation of the work after the death of its author.[118] Other theories such as unfair competition could be used, but this doctrine is designed to protect the economic rights of authors and not their moral rights. The very name suggests exploitation and protection of the value of commodities, and its expansion in the field of moral rights or to the protection of purely personal rights will certainly be difficult for the courts.

In sum, what I wish to demonstrate with these few examples is that the recognition of authors' rights has far-reaching consequences in monitoring the cultural heritage of one nation. Common law protection has been through libel, unfair competition, copyright, and possibly the right to privacy. In my opinion it is difficult to homogenise and set up a consistent approach to authors' moral rights. Moreover, this shows that copyright is driven primarily by economic motives. The French system, despite its over-protective abuses, which in my opinion tend to undermine public access to works of the mind, tries to answer the need for the protection of the

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[118] Hoffman, *European Legislation and Judicial Decision in the Fields of Copyright in 1930*, 8 New York Law Universtiy Law Quaterly Review 1931, at 369.

creator's personality. I am concerned here ultimately with the effect that both systems may have on the creative environment. Once again, when making choices one has to bear in mind that pecuniary rights compose only one form of incentives which influence the creativity.

*Chapter IV*

# THE EMERGENCE *of* INTELLECTUAL PROPERTY RIGHTS: A NEW ECONOMIC APPROACH

> *"Information technologies also may succeed in undermining the economic incentive of knowledge-producers to continue producing knowledge. With every man a publisher, traditional publishing houses no longer control the technical means of knowledge production that once did. Therein lies our dilemma."*
>
> - Nicholas L. Henry*

Intellectual property, and especially copyright, offers ample grounds for theoretical and empirical analyses of markets in products of the mind. In conventional economics, intellectual property rights incorporate an explicit trade-off between private incentives and social benefits which determines exclusive rights on copies for a limited period of time. Accordingly, private incentives are expected to arise from the right holder's limited monopoly powers and social benefits are expected to include additional benefits to society from the induced disclosure and dissemination of products of the intellect.

Unfortunately, economists do not have a final word for legal practitioners concerning the optimal intellectual property system. Only a broad economic literature on intellectual property and innovation is at the disposal of legal theorists. Some people simply believe that they provide an unwitting parody of what must be done by

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* Nicholas L. Henry, *Copyright: Its Adequacy in Technological Societies*, 186 Science 1974, at 993.

way of the least productive lines of inquiry.[1] In my opinion, this shows lack of openness and understanding of what contrives intellectual property rights. Moreover, many economists have dedicated their efforts to bring new light to intellectual property issues. These efforts to comprehend issues related to intellectual property are made all the more difficult by the rapid changes in technology. The position has been put with commendable clarity by Donald Quigg:

> "After all, it has been said many times that the field of intellectual property protection stands at the crossroads of technology, the law, and economics."[2]

As a system, intellectual property seeks to fulfil certain goals by legal, economic, and social means. As such, copyright and *droit d'auteur* create private property in creative works so that the market can simultaneously provide economic incentives for authors and disseminate authored works. Accordingly, the system responds with other modes of resource control when markets fail to generate economically desirable outcomes, works of the mind in our case, or when using the market process would threaten other social goals, the dissemination of works.

This chapter will be mainly concerned with the fundamental problem of the emergence of property rights and market formation in products of the intellect. Markets are systems for consensual exchange of owned goods which are intended to encourage people to make productive use of resources. Nonetheless, many impediments prevent markets from forming. Accordingly, the effects of information technology on the current intellectual property right system will be explored in order

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[1] George L. Priest, *What Economists Can Tell Lawyers About Intellectual Property?*, 8 Research in Law and Economics 1986, at 19-20.

[2] Donald J. Quigg, *Safeguarding Intellectual Property - Stimulus to Economic Expansion*, in *Intellectual Property Rights and Capital Formation in the Next Decade*, Charls E. Walker & Mark A. Bloomfield, eds., (New York: University Press of America, 1988), at 33.

to elaborate a new approach toward the formation of intellectual property rights and achieve desirable dissemination and to avoid the erosion of incentives. Emphasis will given to intellectual property as economic rights within market mechanisms rather than legal property ones.

Above all, I would like to introduce the problem of intellectual property in a more societal manner. In doing so, I will insist upon a point of definition which has its importance in the information age society. Economists use the term information in theorising about works of the mind. The trouble with using the term information is that it seems to place no value upon differentiation, in other words to give meaning to data or facts. Therefore, I will use the term information in opposition to data or factual knowledge. There is of course nothing wrong with facts or data such as given in a dictionary, or a telephone directory. Nonetheless, it is used exclusively for support rather than illumination. Also, the rate of increase of data, especially with the introduction of the Internet, has not been matched by the rate of increase of information, and accordingly knowledge and wisdom. What I would like to highlight here is that the more data people have access to, the greater the need for them to interpret them. To that respect, information technology allows us to transform data into information or knowledge on a greater scale. An information society is a society which puts greater emphasis on knowledge. Accordingly, intellectual property, and especially copyright protection, has been sought to increase and disseminate such products of the intellect for the benefit of society. Intellectual property, and especially copyright protections, has been designed to increase and disseminate products of the intellect for the benefit of society. With the advent of information technology, more

works are being disseminated and copyright protections have been undermined in the digital environment. A questions arises whether copyright is still nescessary to give economic incentives to produce optimal levels of information. I will attempt to demonstrate that information technology will give greater incentives for the production of works of the mind and may well be undermining the economic approach defended by conventional copyright contenders, baring in mind that copyright cannot not be resumed to the sole protection of economic interests.

First the problem of the production of works of the mind will be posed in conventional economic terms in order to bring a critical position on the conventional approach in the light of information technology. Finally, an attempt to apply this approach to the information infrastructure will be carried out in order to find a rejoinder to the introductory remarks on information.

## POSING THE PROBLEM IN CONVENTIONAL ECONOMIC TERMS

Welfare economics explores how many individual and group decisions interact to affect the well-being of individuals and therefore of society as a whole. General welfare is expressed by a general equilibrium achieved only where competitive forces have led to the equality of marginal benefit and marginal cost in the market of every single commodity.[3] Following Adam Smith's analysis of market-forming, social welfare depends on the market place, since individual transactions serve both social and individual needs. Smith argued that unfettered markets, through the signals transmitted by prices, guide self-interested individuals, "led by an invisible hand to

[3] Robert Cooter & Thomas Ulen, *Law and Economics*, (Harper Collins Publishers, 1988), at 44.

promote an end which was no part of his intention", to do what is best not only for themselves but also for society as a whole.[4] The equilibrium achieved is socially optimal because it is efficient both with respect to the production of goods and to their allocation to consumers. To that effect, goods are distributed efficiently among consumers when it is impossible to transfer or re-allocate goods and services among consumers so as to make any consumer better off without making some other consumer worse off. As a result, any changes in the production and allocation of goods would harm someone and break economic efficiency. An economy that is efficient in production and allocation is socially optimal in the sense of being Pareto efficient.[5] Nonetheless, in reality such conditions are not met due to market failure. Such failures occur for many reasons such as monopoly, public goods, or external effects. As regards knowledge goods, their inherent characteristics prevent markets from forming.

In economics artistic or literary works and inventions of scientific or technological nature constitute knowledge goods, in other words expressions or technical implementations of information or ideas. Interestingly, such goods have some peculiar properties that differentiate them from other goods. Inherently ideas are free goods because the use of an idea, data, and information by one person neither reduces the availability of that information to others nor interferes with the ability of another to consume that same information. As a result, such goods are non-

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[4] Adam Smith, *Am Inquiry into the Nature and Causes of the Wealth of Nations*, Vol.1, (1776), at 477.

[5] Vilfredo Pareto, *Manual of Political Economy*, ( 1972), at 103-180; alternative formulation to the theory by B. Blackwood, *Pareto Efficiency*, The New Palgrave Dictrionary of Economics, Vol.3, (London: Macmillan Press Ltd, 1987), at 811-813.

exhaustible since they are free goods whose stock does not decrease with use. Therefore, it is unlikely that access to ideas and information will lead to rivalry since there are free goods. In other words, joint consumption is described as non-rivalrous.[6] According to Paul Samuelson:

> "A common, collective, or public good is here defined as any good such as that, if any person x; in a group $X_1$, ...$X_i$, ...X consumes it, it cannot feasibly be withheld from others in that group."[7]

Society as a result maximises its welfare by not charging for the use of a book or the ideas contained which are free goods. In economics, the marginal cost of supplying an additional unit of knowledge is near zero since it springs from brain power and does not involve any obvious costs. Furthermore, the idea which may spring from one brain does not preclude someone else's brain coming up with the same idea. As a result, static efficiency standards suggest that a zero price achieves the optimal allocation of resources since there is no cost to recover.

Although these goods once created may be used at no additional economic cost, to create them may be an expensive proposition.[8] This introduces another dimension specific to intellectual goods. Invention or literary work involves production costs, possibly important ones, that obviously cannot be recovered at a zero selling price. On a purely economic perspective, artists and investors would have no incentive to create since they would have to do it for free and possibly lose money

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[6] Paul Samuelson, *The Pure Theory of Public Expenditure*, 36 Review of Economics & Statistics 1954, at 387-389; Paul Samuelson, *Diagrammatics Exposition of a Theory of Public Expenditure*, 37 Review of Economics & Statistics 1955, at 350-356.

[7] Mancur Olson, *The Logic of Collective Action Public Goods and the Theory of Groups*, Harvard Economic Studies, Vol.124, (Cambridge, Mass.: Harvard University Press, 1965), at 14.

[8] For a general economic framework for analysising net benefits involved out of markets in relation to intellectual property, see John P. Palmer, *Copyright and Computer Software*, 8 Research in Law and Economics 1986, at 212-214.

in the process. Also, a person who transfers information does not give up the information itself since such a person cannot unlearn that information.[9] In effect both individuals may use the information simultaneously. Consequently, there is no complete exclusivity in knowledge once given out. The public good nature of information goods further complicates the problem since ideas and information cannot be appropriated. Understandably, since invention of the wheel was made public, it has been virtually impossible to prevent others from using the same idea freely. As a result, conflicts arise between the efficient static allocation of ideas and the efficient dynamic production of knowledge goods. Static efficiency calls for free access to ideas because additional users do not impose any extra static costs to society. Thus a zero price maximises welfare in the static sense. Dynamic efficiency requires, by contrast, that creation or innovation be pursued to the point where the total incremental value, across all members of society of the incremental creation or invention, is equal to the cost of producing the good.[10] Consequently, individual transactions result in the maximisation of value establishing a price which maximises production and allocation of products. In other words production is limited in quantity and consumption is rivalrous where a price controls access to products. Clearly, reliance on such consensual bargains to achieve a socially desirable result cannot be complete since knowledge goods' characteristics inherently prevent markets from

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[9] Raymond T. Nimmer & Patricia A. Krauthaus, *Information as Property Databases and Commercial Property*, 1 International Journal of Law and Information Technology 1993, at 11.

[10] Robert P. Benko, *Intellectual Property Rights and New Technologies, in Intellectual Property Rights and Capital Formation in the Next Decade*, Charls E. Walker and Mark A. Bloomfield, eds., (New York: University Press of America, 1988), at 29.

achieving that goal. In effect the transaction costs outweigh the net benefits that the parties would have gained.

Fundamentally, there is a need to understand how markets are being formed since these are the essence of the economic theory of property, and especially intellectual property in the form of copyright. Dynamic efficiency evolves out of consensual bargains. The bargaining model works as a co-operative game because parties can both benefit from co-operating with each other.[11] As a result, an agreement, if reached, will be the product of negotiation between the parties. The fact that the parties can negotiate is an advantage of bargaining games relative to other games such as the Prisoner's Dilemma, in which the inability of the parties to communicate makes achieving a co-operative surplus difficult, even impossible.[12] The possible outcomes of this game theory are a co-operative solution or a non-cooperative one. With a co-operative solution, a surplus is determined and distributed according to the terms of the agreement. But disagreement or failure to cooperate may happen. The fact that parties do not agree means that nobody is better off or loses since they keep their original position or threat value. However, no surplus can be shared. Therefore, it may be argued that both parties have lost a possible surplus to share. As a result, the process was costly of the possible surplus. Rationally each party tries to minimise costs, and especially the loss of a possible surplus. Failure to co-

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[11] See generally, Martin Shubik, *Game Theory in the Social Sciences: Concepts and Solutions*, Vol.1, (Cambridge, Mass.: MIT Press, 1984).

[12] For a comprehensive expample of the Prisoner's Dilemma using intellectual property rights as an example, see Wendy J. Gordon, *Asymetric Market Failure and Prisoner's Dilemma in Intellectual Property*, 17 University of Dayton Law Review 1992, at 860-866.

operate in fact prevents markets being formed. In other words, transaction costs are conditions impeding perfect competition which involves losses for society.

Thomas Hobbes echoed the importance of minimising such losses.[13] He argued that people would seldom be rational enough to agree upon a division of the co-operative surplus even when there were no serious impediments to bargaining. As a result the natural cupidity of people would lead them to quarrel unless a third and stronger party forced them to agree. Hobbes suggested a principle to structure the law in order to minimise the harm caused by failures in private agreements over resource allocation.[14] This principle has been known as the Normative Hobbes Theorem. Law should be designed to prevent coercive threats and to eliminate the destructiveness of disagreement. Other obstacles to co-operative bargaining exist, whether in a state of nature or in a modern legal framework. The central purposes of property law, and contract law, are to remove such obstacles to private bargaining since voluntary exchange is mutually beneficial and successful bargaining generates a co-operative surplus. Therefore, an economic analysis of property ought to investigate the obstacles to private bargaining and demonstrate how legal rules can contribute to overcoming these obstacles.

Three obstacles to co-operation may be determined as communication costs, monitoring costs, and strategic costs.[15] First, bargaining is made easier when the threat points are public knowledge. As a result, rules which allow parties to be aware of their

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[13] Thomas Hobbes, *Leviathan ot the Matter, Forme and Power of a Commonwealth Ecclesiasticall and Civil*, Part.1-Chapter 15 "Of other laws of nature", (1651).

[14] Robert Cooter, The Cost of Coase, 11 Journal of Legal Study 1982, at 1.

[15] Robert Cooter and Thomas Ulen, *Law and Economics*, (Harper and COllins Publishers, 1988), at 101.

respective opponents' position are more likely to co-operate and facilitate co-operative solutions minimising negotiation time and expenses.[16] Therefore, when stated publicly in legal terms, positions or rights facilitate bargaining games or help in solving legal disputes. Therefore, the simpler property law criteria are the easier it is to determine ownership. Second, co-operative solutions require monitoring and policing which can be costly. The number of the disputants and their geographical dispersion play a major role in the cost of negotiating or communicating. Also, monitoring the cost of enforcing the agreement would be low inasmuch as violations of the agreement are easy to observe and manage. Third, dividing the surplus is difficult without any rational agreement. Unreasonableness in demands may result from emotional concerns or when parties strategically push their claims beyond reasonable limits. In sum, one essential aspect of bargaining is to anticipate strategically an opponent's threats and position in order to establish a surplus. Any wrong assessment of the opponent's expectations may result in failure to cooperate as parties immediately insist on their own position. Explanations of failure are often that parties are unknown to each other and cannot foresee what to expect from each other before entering any co-operative game. Consequently, one can see that beyond the normative Hobbes theorem, property law could facilitate private agreements by reducing communication, monitoring and strategic costs. Ronald Coase argued

[16] Elizabeth Hoffman & Matthew Spitzer, *The Coase Theorem: Some Experimental Tests*, 25 Journal of Law & Economics 1982, at 73.

another normative principle which asserted that the law ought to be structured in order to remove impediments to private agreements over resource allocation.[17]

Clearly, legal systems act in diverse ways to increase the probability that such conditions will be present for market-formation. Therefore, when a market does not work properly, a decision will often have to be made on whether market transactions or collective fiat are more likely to bring parties closer to the result the perfect market would have reached. Two possible legal responses may occur. One is the creation of governmental or public agencies which make resource allocation decisions by means of regulations or are empowered to enforce regulations. For instance, some authors or public agency may enforce intellectual property rights and help contracting parties. Another is to set up incentives that encourage the achievement of efficient results even in the absence of markets. Intellectual property systems, and especially copyright law, intend to produce incentives for the production of knowledge goods. As Isaac Newton confessed, "[i]f I have seen far, it is by standing on the shoulders of giants."[18] Copyright law creates private property in creative works as an effort to cure market failure stemming from the presence of public good characteristics. On the one hand, such legal means secure monopolies to remedy the appropriability problem, thus reaching a social optimum in dynamic situations. To that effect, they violate static economic efficiency, or optimal resource allocation, in the short term in an effort to generate a continuing supply of creative goods by facilitating dynamic efficiency.

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[17] Ronald Coase, *The Problem of Social Cost*, 3 Journal of Law and Economics 1960, at 1; alternative formulation to the theorem presented by Robert Coter, *The Coase Theorem*, The New Palgrave Dictionary of Economics, Vol.1, (London: Macmillan Press Ltd, 1991), at 457-459

[18] Isaac Newton cited in Suzanne Scotchmer, *Standing on the Shoulders of Giants: Cumulative Research and the Patent Law*, 5 Journal of Economic Perspectives 1991, at 29.

Copyright monopolies guarantee owners the right to control the use made of their works in order to receive a revenue producing an appropriate level of incentive to create or produce knowledge goods. On the other hand, monopoly imposes certain costs on society for the promise of additional and future benefits, namely creations and inventions. As Judge Frank Easterbrook put it:

> "The tradeoff is not monopoly versus competition, or protection in exchange for disclosure. It is dynamic gains in exchange for allocative losses."[19]

Therefore, copyright law attempts to balance costs imposed on society with the benefits gained, in other words to strike a balance between future diffusion and immediate exclusion. For instance, technical implementations or artistic creations would legally be considered copyrightable or patentable, or neither, according to the principles applied by each form of protection. Consequently, copyright and *droit d'auteur* alike have been designed to protect only the expression of ideas and not the ideas themselves, since society ought to have free access to ideas and knowledge. As such, the system is designed to reflect the economic interests of creators and society as well as to strike a balance between the social costs and social benefits of creations. The chief justification for imposing such disturbances to static efficiency is taken as a reflection of broader social concerns for long-run growth, technological progress and cultural enlightenment. Nonetheless, costs and benefits must be weighed and balanced in the construction of any particular intellectual property system. Society has relied mainly on legal monopolies, in the form of copyright and patent, in order to balance individual and social interests.

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[19] Frank H. Easterbrook, *Intellectual Proerty is Still Property*, 13 Harvard Journal of Law & Public Policy 1990, at 110.

Copyright creates private property in creative works so that the market can simultaneously provide enough economic incentives for authors and disseminate authored works. The case for private ownership rather than communal or public ownership advocates principles of efficient use of natural resources. It is not by accident that society has made the choice of privileging private ownership in the form of copyright. The rise of private ownership came along with the promotion of patent-monopolies and individualism in medieval and renaissance times. More recently, it has been argued that communal use as an open access to natural resources, results in over-use and ends in destruction of natural resources.[20] Therefore, resources are efficiently used when among other things the price for using resources reflects their value in the next best alternative use, in other words what economists call their "opportunity cost". Therefore, a pricing scheme leads to the efficient use of property. For instance, ideas contained in books may be free goods, but copyright allows publishers to appropriate the value of books through a pricing scheme. By private, economists mean an individual, for instance an author, or an organisation such as a publishing company. Therefore, a publisher becomes a temporary private owner of the written contents of his publications. Efficient use of resources would result from private ownership as opposed to communal property which would lead to a sizeable welfare loss due to reliance upon communal property rights. Copyright, in attributing private property rights, allocates resources to people in order to give them liberty over knowledge goods, in other words, creates a zone of discretion within which owners

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[20] R. J. Agnello and L.P. Donelly, *Property Rights and Efficiency in the Oyster Industry*, 18 Journal of Law & Economics 1975, at 521; G. Power, *More About Oysters Than You Wanted to Know*, 30 Maryland Law Review 1970, at 199.

are free to exercise their will over their property in order fully to appropriate production of knowledge goods. Exclusion is thus the means by which authors and publishers protect their publications. As explained, the marginal cost of use of free goods is zero. Copyright allows creators to set a price in excess of marginal cost and therefore create an allocative loss for society which should not exceed the benefits of the creation for society. Nonetheless, creation of a zone of exclusion assumes that one author's use, or expression, of ideas can be separated from others since different publications may rest upon identical ideas. For instance, individuals who independently express identical ideas or discover the same information are not subject to the first company's rights but hold independent rights to use, transfer or disclose their property.[21] Clearly, one can see that it is difficult to separate the property interests of each individual protected by copyright law. Added to this, the essential role of property, in other words of copyright, is to use ideas efficiently in maximising production of knowledge goods in order to increase the public domain. Once non-separability of individual property rights occurs, difficulties arise about enforcing individual property rights and producing knowledge goods efficiently.

Fundamental considerations may be drawn from the non-separability problem of private property. The key condition for efficient use of resources, or market-forming, is that all costs and benefits are internal to the transactions that generate them. As a result, costs or benefits must be borne by persons with decision-making power in a given transaction and not by persons external to it. By contrast, public

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[21] Raymond T. Nimmer & Patricia A. Krauthaus, *Information as Property Databases and Commercial Property*, 1 International Journal of Law and Information Technology 1993, at 9.

goods involve externalities which induce market failure.[22] Copyright law intends to internalise externalities. Knowledge goods have two crucial properties, non-exhaustiveness and non-excludability. The full benefit of the good is available to each individual without reducing the quantity or quality of the good which is thus characterised by indefinite large marginal costs of exclusion. Consequently, potential consumers are uncertain about the utility of knowledge goods because it is difficult to determine their value until they have them, having necessarily paid for them. Since potential consumers cannot establish their utility it is impossible to offer a price for the use of the good. Producers face problems of similar economic importance. They encounter extreme difficulties in appropriating the value of knowledge goods through sale after devoting resources to their production. This is explained by the fact that once information is sold to one person, the latter becomes a potential competitor of the original producer owing to the low cost of transmitting information. Therefore, each consumer is a potential "free-rider". By definition a free-rider is an individual who makes decisions in his own interest and is thus willing to pay no more than the cost of transmission for the commodity. A free-rider may well be a person who makes a tape-recorded copy of a CD for himself, or for sale and therefore make a profit without having to bear all the costs of producing the CD. Such a behaviour has in fact an imperceptible effect on society since markets for pure public goods are characterised by a large number of participants.[23] Nonetheless, one can understand that for information goods, free-riding may prevent people from producing original

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[22] Paul Samuelson, *Pure Theory of Public Expenditure and Taxation*, in Margolis and Guitton, eds., (London: Public Economics, 1969), at 102.

[23] Earl R. Brubaker, *Free Ride, Free Revelation, or Golden Rule?*, 18 Journal of Law & Economics 1975, at 148.

works since others may "steal" them. The law may consider the second situation as an infringement of copyright and act against the person who is deliberately pirating the works for profitable ends; however, in economic terms both situations have an effect on markets, and excluding non-paying beneficiaries, in other words non-contributors to the costs of supplying such goods, becomes an extremely expensive proposition. Because of the difficulties of determining a collective demand, a collective good intermediation is necessary in order to internalise such externalities. Accordingly, copyright laws are meant to provide such a service in facilitating the necessary negotiations in order to establish optimal allocation of resources. Therefore copyright is a form of coercive polity initiated by government, which is intended to induce full expression of demand since full voluntary expression of the amount of public good desired and full voluntary contribution to its supply is highly unlikely to occur.[24] As Lord Macaulay stated :

> "The principle of copyright is this: it is a tax on readers for the purpose of giving a bounty to writers. The tax is an exceedingly bad one - it is a tax on one of the most innocent and most salutary of human pleasures; and let us never forget that a tax on innocent pleasures is a premium on vicious pleasures".[25]

Copyright is undoubtedly a coercive governmental intervention which intends to correct market failures for the public interest. Accordingly, careful attention ought to be given to any forms of taxation which cannot be sustained by the public interest. With the advent of information technology, one may inquire whether copyright still serves the public interest.

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[24] Ibid.

[25] T. Macaulay, *Speeches:Parliamentary and Micellaneous*, Vol.2, (London: H.Vizetelly, Clarke, Beeton, 1853), at 292.

It should be stressed that an externality is not only a cost but also a benefit that the voluntary actions of one or more people impose or confer on third parties without their consent. Creation of knowledge goods assumes the use of resources which may or not belong to the public domain. In some cases, such as academic endeavours, much of the social benefit produced by use of resources by scholars does not translate into full compensation. Added to that, such endeavours may generate external benefits which are not fully translated in incomes received.[26] As a result, it may be assumed that scholars' willingness to pay for resources might understate their ability to use resources in a way that serves social needs. In other words they may over-invest and thus not induce efficient use of resources. What I am concerned with here is the efficiency of markets established by copyright. Copyright as a mechanism for facilitating socially desirable transactions fails to a certain extent to internalise correctly such production. Consequently, the costs and benefits for the uses of resources may differ from the exact social costs and benefits at stake in such circumstances, to the effect that transactions leading to an increase in social benefit may not occur. These beneficial externalities induced by potential users who may wish to produce socially meritorious works by using some copyright materials are in fact unable to use the materials because the market structure prevents them from being able to capitalise on the benefits to be realised. I have argued that copyright creates a zone of exclusion within which owners are free to exercise their will over their property in order fully to appropriate production of knowledge goods. Enforcement of copyright exercises a coercive power, giving owners an ability to bar certain uses of

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[26] Wendy J. Gordon, *Fair Use as Market Failure: A Structural and Economic Analysis of the Betamax Case and its Predecessors*, 82 Columbia Law Review 1982, at 1630.

their creative work and thus giving them the ability to extract a price from the use from those who wish to use their work. Such a constraint is balanced in theory by free access to ideas and concepts in order to ensure that production and allocation remains socially optimal. One can clearly understand that striking a balance between exclusion and dissemination depends highly on the principles upon which the intermediation service is based. The twin pillars of copyright law are that only expressions of an original idea are granted monopoly rights, and that only the physical expression which embodies the idea is protected, as opposed to the *droit d'auteur* which protects expressions of the intellect whatever their form. Failures in respecting any of these respective principles lead to an inbalance. As long as the benefits exceed the costs imposed to society, copyright remains overall beneficial to society.

Economic efficiency concerns solely the production of wealth. Because a society incurs the costs of defining property rights over a resource only when the benefits of that definition exceed the costs, valuable resources remain in the public domain until the cost of administering a system of property rights is not prohibitive. Therefore, it may be argued that laws which tend to evolve toward economic efficiency need to obey that principle. Copyright law has depended upon physical commodities; in other words it is a system of control based upon a medium-by-medium basis.[27] With the rise of new technologies, and especially communication and information technologies, the very foundations of copyright law have been challenged, and questions arise whether or not copyright still fulfils that purpose. New media of expression have been reduced to a single digital form, which has evolved

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[27] Janusz A. Ordover, *A Patent System for Both Diffusion and Exclusion*, 5 Journal of Economic Perspectives 1991, at 43.

into complicated electronic networks leading to market failure. Property interests of different individual authors have become complex to monitor since separation between ideas and their expression has been blurred. Because separability of individual property rights has become difficult, enforcement of individual property rights, and thus efficient allocation and production of ideas, has turned out to be impractical due to a rising of social costs to the detriment of social benefits. In practice, information technology has heightened the strategic significance of access to information in today's competitive world markets. For instance, access to worldwide information databases has been made possible through the Internet. Moreover, importance is given to the control of information, since it has become a crucial resource for public and private organisations, and nations alike. Such developments have raised questions about current copyright mechanisms establishing property ownership and the optimal production of knowledge. Hybrid forms of copyright protection, incomplete and often uncertain in their ability to strike a balance between social and individual interests, have attempted to stretch traditional intellectual property systems in order to fit new technological requirements. Contrary to the expected effect, such systems have over strained the original mechanism to run the risk of inadvertently undermining it.[28] It is enough to mention copyright protection of computer software to illustrate this dilemma. In stretching copyright principles beyond their original intent in order to accommodate software's intellectual property needs, copyright protection has been undermined. The consequence has been to blur the distinction between industrial property and literary or artistic property, in their

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[28] J.H. Reichman, *Legal Hybrids Between the Patent and Copyright Paradigms*, 94 Columbia Law Review 1994, at 2432.

respective monopoly rights and their intended purposes. Accordingly, a review of their structure and operation in light of each system's goals has become necessary.

In order to re-examine copyright protection, it should be clearly understood that what one should analyse is how efficient copyright is as a common good intermediation service. Copyright is one system among many others which has served this purpose. Two fundamental questions need to be answered. First, I will look at current intellectual property rights to see whether or not they are adequate incentives for the optimal production and allocation of information resources. In other words, is there a need for intellectual property or copyright protection? Second, as an intermediary service it is crucial to consider whether or not the system is practicable in order to provide the intended incentives. Such a system must allow potential users to bargain around its coercive mechanisms. Markets allow owners of knowledge goods to sell their work and not copyright. If such people are unable to obtain a price reflecting the value of their work, there will be a lack of incentives which will result in fewer works being created. Market failures exist because bargaining is impeded by problems of externalities, high transaction costs, and no market substitute and therefore access to ideas will be denied to society. Consequently copyright should not be enforced since the mechanisms are faulty, in other words do not strike a balance between exclusion and dissemination. Some have already argued that there may be some situations when authors could obtain payment, and therefore appropriate their goods, without copyright protection. For instance, Stephen Breyer[29] and Tom

[29] Stephen Breyer, *The Uneasy Case for Copyright: A Study of Copyright in Books, Photocopies, and Computer Programs*, 84 Harvard Law Review 1970, at 281.

Palmer[30] have debated on the extent to which intellectual property protection is really necessary in various industries. In order to answer these questions, it will be necessary to investigate how rational player behave under a variety of specified constraints, and especially under the new information technology ones. This will determine which payoffs each players may receive according to their constraint choices and how they act in order to maximise the benefits.

## CRITICAL POSITION TOWARD THE CONVENTIONAL THEORY

The conventional theory attempts to establish how knowledge good markets are prevented from being Pareto efficient. Attribution of temporary monopoly has been the economic answer to market failures in an attempt to remedy such deficiencies. To that effect, it has already been argued by Bruno Leoni and Friedrich Hayek that copyright provisions are not forms of legitimate property rights but of illegitimate state-granted monopoly. They are not natural wealth maximisation out of a bargaining process.[31] Since the publication in 1960 of Ronald Coase's essay on *The Problem of Social Cost*, the attention of economists has been generally focused on the institution of property.[32] The work of Coase on externalities, and especially transaction costs, has brought the problem of property rights into focus, allowing greater attention to be paid to the emergence and structure of property rights. As such, intellectual property has come under closer scrutiny. Coase's analysis recognised external effects which can be internalised through the assignment of property rights in order to correct market

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[30] Tom G. Palmer, *Intellectual Property: A Non-Posnerian Law and Economics Approach*, 12 Hamline Law Review 1989, at 261.

[31] Peter H. Aranson, *Bruno Leoni in Retrospect*, 11 Harvard Journal of Law & Public Policy 1988, at 665.

[32] Ronald Coase, *The Problem of Social Cost*, 3 Journal of law & Economics, 1960, at 1.

failure, especially concerning public goods. Following his analysis, I will attempt to examine the effects on intellectual property rights in light of information technology development.

The conventional approach to the economics of intellectual property rights is illustrated by two divergent property propositions expressed by the copyright law and *droit d'auteur*. The economic approach attempts to explain how society makes the best use of scarce resources in putting resources under the exclusive control of individuals rather than their exploitation at will by all comers on the market. The two legal approaches attempt to provide incentives for creative activity. And both advocate the creation of property rights in order to reach their common objective. Some have argued that:

> "This theory was latent in the Roman law development of the rights of property, with its emphasis on *dominium*, or exclusive control over tangible objects."[33]

As a matter of fact, I have already argued and contended that not only had the Romans elaborated a concept of intellectual property based upon physical ownership of manuscripts but also one of personal rights which remained the property of creators. No economic provisions were prescribed to internalise externalities; nonetheless, semi-legal provisions prevented plagiarists from unscrupulously copying someone else's verses. To that effect, it could be argued that protection of accuracy and integrity of works is guaranteed to provide reasonable incentives to creators to publish their work. Also, the theory about the evolution of property rights is based upon the assumption that the structure of property institutions evolves out of "factors which

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[33] Robert M. Hurt and Robert M. Schuchman, *The Economic Rationale of Copyright*, 56 American Economic Association 1966, at 422.

govern changes in the content of property rights".[34] Factors of change range from technological innovations and the opening of new markets relative to scarcity factors to the behaviour of the state. Western society has experienced many changes such as the introduction of the *pergamon* in Roman time and the invention of the printing press in the late Middle Ages. Similarly, different property rights have been established by society. As a result, the rise of information technology will undoubtedly affect the institutions of intellectual property rights. Currently, copyright claims are acquired from and enforced by government in an attempt to have an entity which gives control over products of the mind. Such contentions can be supported especially by copyright law as developed in common law countries. Investors in intellectual products serve the polity of the state. Copyright protection distinctively relates to the acceptance of John Locke's philosophy in which the primary function of a government is to protect property titles and to the *laissez faire* philosophy inherited from Adam Smith.[35] There is no need to emphasise that the logic of copyright protection is firmly a response to technology, and especially printing, where, as Jeremy Bentham put it:

> "Property is nothing but a basis of expectation; the expectation of deriving advantages from a thing, which we are said to possess, in consequence of the relation in which we stand towards it."[36]

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[34] Terry L. Anderson and P. J. Hill, *The Evolution of Property Rights: A Study of the American West*, 18 The Journal of Law and Economics 1975, at 164.

[35] Right of governing and power set alongside that of presserving oneself and the rest of mankind, see John Locke, *Of Civil Government, Two Treatises*, II § 128-30, (17"").

[36] Jeremy Bentham, *Theory of Legislation: Principles of the Civil Code*, Chapter 8 "Of property" (1776), at 111; Also "the common tendency of man to make a duty and a virtue of following his self-interest", see John Stuart Mill, *Utilitarianism; On Liberty; Essay on Bentham*, (London: Fontana Press Ltd, 1985), at 118.

Moreover, property rights rest in the hands of authors according to the postulate upon which the use of reason attributes to man property of the products of his creation.[37] Such contentions have become today the refuge of justification for intellectual property titles vested in authors by copyright law. Moreover, there is a different degree of importance and interdependence according to whether concerns are expressed from creators or producers.

In theory, decentralised property rights rather than state provisions are normally preferred in order to avoid interference with markets in the form of imposed monopolies. Copyright provisions have been introduced because investors in knowledge goods could not sustain the optimal amount of production in a competitive environment. In such an environment, marginal benefit and marginal cost would be equal where price per unit equals marginal cost. By contrast, a profit-maximising monopoly results in an output and price combination which occur at a point where the price per unit exceeds the marginal cost of production.[38] As a result, the efficiency of monopolies can be questioned since a monopoly's price does not result from an equilibrium. Therefore, the obvious public policy would be to replace such monopoly by competition in order to introduce efficient uses of resources. As regards copyright, government has on the contrary created temporary monopolies by law in order to sustain an optimum level of creative activity. Such public intervention may be called the standard economic theory of intellectual property. Since Coase's work, additional theories have been advocated which seek to suppress monopolies when the original

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[37] Man has the right to the fruits of his labour, see John Locke, *Of Civil Government, Two Treatises*, II § 32-40, (1698).

[38] Robert Cooter & Thomas Ulen, *Law and Economics*, (Harper Collins Publishers, 1988), at 45.

producer can indirectly appropriate enough revenue to compensate costs of producing or when there is too much information created on one specific area.[39] Therefore, one might assume that economists have proposed alternative theories to the conventional one. I would contend that this is not the case. What economists have argued is alternative public policies which require a certain of taxonomy of information which would allow the state to determine when to attribute monopolies or not to intervene. Therein lies a problem. Proponents of such theories recognise that it is impossible to determine such a system. Some have argued that markets of non-tangible goods may function in the absence of intellectual property rights.[40] I would simply contend that property rights should be formed outside the interventionist scope of the state. Alternative economic solutions have to be found at the formation of property rights which can recognise the intellectual interests of creators in the product of their mind. Therefore, a close examination of the emergence of property right institutions need to be pursued.

The primary function of property rights is that of guiding incentives to achieve a greater internalisation of externalities.[41] By making possible negotiations among parties whose actions create external effects, property rights allow them to attain higher levels of satisfaction than would otherwise be possible. Property rights can emerge when changes in technology, demand, or other factors create externalities that were previously absent, and internalise externalities when the gains of internalisation

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[39] Robert Cooter & Thomas Ulen, *Law and Economics*, (Harper Collins Publishers, 1988), at 115.

[40] Tom G. Palmer, *Intellectual Property: A Non-Posnerian Law and Economic Approach*, 12 Hamline Law Review 1989, at 261; see also its critic, Michael J. Krauss, *Property Monopoly and Intellectual Rights*, 12 Hamline Law Review 1989, at 305.

[41] Harold Demsetz, *Toward a Theory of Property Rights, The Economics of Property Rights*, (E. Furobotn & S. Pejovich eds. 1974), at 32.

become larger than the costs of internalisation.[42] Following this line of thinking, two fundamental criticisms can be brought against the conventional economic theory. On the one hand, the conventional theory argues that under-investment in inventive activity of knowledge occurs because the public nature of knowledge goods prevents producers from fully capturing the benefits of their production. As a matter of fact, it should be recognised that traditional "discussions of public good do not pay close enough attention to the definition of a public good" from an institutional point of view.[43] Two main critiques should be brought to our attention. First, the joint consumption assumption ignores the varying levels of use of consumers. Certain circumstances may reduce the consumption of knowledge goods. For instance, certain books may be highly recommended by university teachers, and may result in additional investments to provide substitutes. Therefore, the distinction between private and public good may be blurred in choosing different marginal units by simply itemising course requirements in units.[44] Consequently, the more limited our perception of what is the relevant marginal unit of the good, the weaker we are to perceive goods as private. Second, excludability assumes that there are two ways of supplying goods: one which excludes free-riders and another which does not. According to John Head and Carl Shoup, goods can be supplied in a marketing mode which allows exclusion and in a non-marketing mode which does not exclude

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[42] Ibid.

[43] Tyler Cowen, *Public Goods Definitions and Their Institutional Context: A Critique of Public Goods Theory*, 43 Review of Social Economy 1985, at 53.

[44] Tyler Cowen, *Public Goods Definitions and Their Institutional Context: A Critique of Public Goods Theory*, 43 Review of Social Economy 1985, at 57.

anybody.[45] Both modes imply costs of production and therefore comparison of optimal level of production cannot be assessed, as it is under the conventional theory, upon the quantity of output. Accordingly, these critics astutely contended that the optimal level of production should be considered in relation to the mode of supply. Consequently, supply of goods can looked at from a different angle. Clearly, exclusion may be said to be always possible; it is more or less costly. Therefore, excludability is not related to the nature of goods but rather how they are supplied and at what levels they are produced and consumed.[46] As regards information technology, emergence of property rights will therefore be modified since exclusion may become less costly. On the other hand, contentions that a creator or inventor can only hope to capture some fraction of the technological benefits due to his discovery overlooks the consideration that there will be, aside from the technological benefits, wealth redistribution due to price revaluation from the release of the new information.[47] Accordingly, publishers in being first on the market with the publication should be able to capture a portion of these pecuniary effects. As such, this should be socially useful in motivating publication of knowledge goods. Furthermore, Jack Hirshleifer contends that:

> "Even though practical considerations limit the effective scale and consequent impact of speculation and/or resale, the gains thus achievable eliminate any a priori anticipation of underinvestment in the generation of new technological knowledge."[48]

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[45] John Head & Carl Shoup, *Public Goods, Private Goods, and Ambiguous Goods*, 79 Economic Journal 1969, at 569 cited in Tyler Cowen, *Public Goods Definitions and Their Institutional Context: A Crtique of Public Goods Theory*, 43 Review of Social Economy 1985, at 60.

[46] Tyler Cowen, *Public Goods Definitions and Their Institutional Context: A Critique of Public Goods Theory*, 43 Review of Social Economy 1985, at 61.

[47] Jack Hirshleifer, *The Private and Social Value of Information and the Reward to Inventive Activity*, 61 The American Economic Review 1971, at 573.

[48] *ibid.*

What I am concerned here with is that not enough attention has been given to the formation of markets themselves. Because production of knowledge good has been protected for so long under the auspices of the state, there has been no attempt to look at alternative incentives which trust market mechanisms. This, I venture to say, is a direct consequence of the narrow vision of what should be intellectual property: a right inherent from creators and not a narrow vision of property rights limited to economic rights. Accordingly, special attention should be given to the situation of both beneficiaries of copyright protection: authors and investors.

Creativity is a complex process in which motives are far from being solely of an economic nature. Expectation of monopoly profits cannot be considered as the exclusive motivation for creativity because the creativity evolves out of emotional and irrational human behaviour.[49] By contrast, economic theory assumes that individual behaviours are by nature rational because *homo-oeconomicus* pursues his self-interest. Added to this prescriptive motivation, rational behaviour:

> "concerns the possible use of models of rational behaviour in explaining and predicting *actual* behaviour. [...] The first consists in characterising rational behaviour, and the second, following that, bases actual behaviour on rational behaviour."[50]

In reality, some people simply create without any intention or hope of revealing to the public the product of their own minds. Propagation of religious, political or any other partisan ideas as well as altruism certainly play an important part in the motivations

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[49] Even though Zhi Griliches looked at patents and patent statistics it has been recognised that "there seemed to be little correlation between aggregate total factor productivity and total patenting numbers". As a result, inventive activity or creation is not as such induced by means of patent or copyright protection, see Zhi Griliches, *Patent Statistics as Economic Indicators: A Survey*, 28 Journal of Economic Literature 1990, at 1670.

[50] For a complete definition of rational behaviour, see Amartya Sen, *Rational Behaviour*, The New Palgrave Dictionary of Economics, Vol.4, (London: Macmillan Press Ltd., 1991), at 68-74.

which lead to the creation and publication of works of the mind. For instance, recognition by peers or enhancement of one's reputation may well give impetus to creation. Furthermore, some creators are also ready to meet the expense of their creative process or pay for some or part of their own publication in order to satisfy their own desires to express themselves. In situation like that in the academia, the rule "publish or perish" dictates most certainly the rate of scholarly publications, which springs less from emotional creativity than from conscious and planned enterprise. Therefore, I believe that all human beings possess the ability to create. With the advent of information technology more opportunities have been offered to individuals to express themselves and to develop their own creativity. What is a creation is a matter of definition; in economic terms it is a matter of social utility or value attributed by society in which emotional and irrational judgement take place under cover of rationality. Contributions with high cultural or scientific content may require financial help before the work is even carried out. By contrast, other artistic, literary and scientific endeavours may spring out of any planned and financed process. Clearly, this shows that the diversity of intellectual endeavours complicate the task of economists in theorising about creators' behaviour. Nonetheless, what should be recognised is that certain works need financial help in advance in order to be carried out. People who invest in such works require a certain assurance that they will get back their investments either in pecuniary form or other benefits. There are some publications, such as magazines and large public literature, which are primarily for the purpose of providing an income to their authors or investors.[51] Investors in such

[51] Stephen Breyer, *The Uneasy Case for Copyright: A Study of Copyright in Books, Photocopies, and Computer Programs*, 84 Harvard Law Review 1970, at 281.

products need efficient means to secure incremental income from subsidiary and re-print rights. However, many other publications with high knowledge content and purely artistic works reflect different concerns, more intellectual than commercial. For instance, creativity may need to be supported at an early stage during the moment of creativity, before the period of publication, and not during the period of income. This can be done through private patronage, tax-exempt foundations, or governmental support. Return on investment will be secured by adequate control of access. Commercial concerns will however be closely associated with authors' concerns in protecting the integrity and accuracy of works, which in fact represent the inherent value of works. One question may have arisen in the mind of the reader: how can one determine to which category each work belongs since I have already rejected the taxonomy proposed earlier on? In our case it is not the state which determines what "public" policy should be applied; rather as creators themselves private individuals determine what is necessary for the realisation of their projects. The approach has shifted from the public authorities to private individuals who co-operate with producers for the provision of knowledge goods. As already noted, such a shift occurred in the emergence of *droit d'auteur*. Moreover, it should then be clear that adequate intellectual property rights, and especially moral rights, would protect authors' creative independence against pressure from investors.

On the supply side, publishing houses and other investors in knowledge goods have direct commercial concerns unless they act as liberal patrons. Nonetheless, in the latter case, creators are commissioned for a definite work which as a result will also bear the personality of its commissioner. It then becomes difficult to distinguish each

personal contribution and accordingly to value its utility. Here lies another fundamental difference between *droit d'auteur* and copyright. For instance, rights vest in the employers and not the employees unless otherwise provisioned. Incentives to create fall on the side of a system which recognises personal contributions. Generally speaking, publishing houses perceive creative activity as a source of profits and increase their assets by acquiring rights in products of the intellect. The function of publishers is almost exclusively entrepreneurial. As a matter of fact, certain houses argue that they are generally publishing at a loss and the reason why they are still publishing is because the few successes compensate the losses of the many. With the rise of information technology and other computing facilities, publishing is no longer the exclusive field of established houses, and is open to small businesses.[52] Computer hardware costs are continuing to fall. For instance, four years ago the entry price for an IBM mainframe was almost $3 million. Nowadays IBM second generation CMOS-based mainframes are expected to be a bargain with prices starting at about $500,000 for a uniprocessor.[53] Technology has become more affordable to individuals enlarging publishing potential for independent publishing endeavours at the same quality level. In other words, there are fewer capital requirements and the industry is becoming highly competitive, lifting entrance barriers which have been supported by copyright law. Also, with the enlargement of the creators' community and the new technical facilities, users will most certainly become beneficiaries in terms of access to a wider range of work. Nonetheless, concerns are expressed about the quality of future

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[52] Nicholas L. Henry, *Copyright: Its Adequacy in Technological Societies*, 186 Science 1974, at 993.

[53] Information Week, 19 June 1995, at 24.

endeavour as well as about the future of publishing houses, and it is argued that users will ultimately be the losers of the game. Such gloomy descriptions of the future of publishing need careful critical analysis.

Monopoly grants cannot be the only method of avoiding bankruptcy. For instance, in the early years of the French *droit d'auteur*, bankruptcies were far from being imputable to the lack of monopoly rights. Moreover, in a competitive environment new markets are formed and others vitiated. Judge Stephen Breyer carried out a survey of the economic health of publishing enterprises and concluded that the case for granting copyright monopoly and for extending it to new types of creative activity is weak.[54] He pointed out that the original publisher has an advantage: a "lead time". As a matter of fact, Sir Louis Mallet had already argued in 1878 in favour of the abolition of copyright monopoly in similar terms. He explained his position in contending that:

> "it will always be in the power of the first publisher of a work so to control the value, by a skilful adaptation of the supply to the demand, as to avoid the risk of ruinous competition, and secure remuneration both to the author and himself."[55]

The entrepreneurial function of publishers includes the ability to gauge demand at the projected price. In economic terms the fixed costs of the copier are lower; however, the marginal costs of production will be similar to the first publisher on the market. The copier will therefore probably need to sell on the market as many copies as the original publisher in order to reduce its average costs significantly below those of the original publisher. As a result, a large quantity of books will not be sold at "normal" price until they are reduced. Since both publishers have similar marginal costs and

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[54] Stephen Breyer, *The Uneasy Case for Copyright: A Study of Copyright in Books, Photocopies, and Computer Programs*, 84 Harvard Law Review 1970, at 281.

[55] cited in Arnold Plant, *The Economic Aspects of Copyright in Books*, 2 Economica 1934, at 193.

possibly the original publisher has a better edition in terms of quality, it will be possible for him to reduce his price and dispose of his stock competing against copied editions. As a matter of fact, such a hypothetical case may have been drawn from real situations where established publishing houses have had to engage in price wars against pirated editions, establishing by the same token "a reputation for retributive conduct".[56] Contracts with authors may also reserve exclusive rights to new introductions, additions and revisions by the author to subsequent editions. This should reinforce especially the theory of assignment of rights to authors and their intellectual interests in protecting the accuracy and integrity of their works. Would Arnold Plant be right in declaring that "[t]he abolition of copyright need not therefore result in the complete abandonment of the business of book production either by publishers or by professional authors"? [57] Clearly, changes in copyright protection will most certainly not affect publishers so dramatically but simply require a better integration of authors' interests in the production of products of the intellect. What it is important to realise is that there are some ventures which are expected to and do cover costs of production even in the absence of copyright. Therefore copyright is not necessary as encouragement to take these risks. In fact, copyright simply enhances artificially private returns on these ventures and leads to the distortion of monopoly prices. In other cases, some ventures cannot cover costs of production despite the assistance of copyright. Thus the commercial success of one venture could cover the failure of others.

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[56] For instance, American publishers in the nineteenth century threatened pirates with retributive behaviour in order to deter the copier until the first edition was sold out, see Arnold Plant, *The Economic Aspects of Copyright in Books*, 2 Economica 1934, at 173.

[57] Arnold Plant, *The Economic Aspects of Copyright in Books*, 2 Economica 1934, at 175.

Consequently, the focus of attention should be the emergence of property right in light of new technologies. Markets are formed by exchange which needs to be voluntary and mutually beneficial for all parties. Therefore, an economic effect which is external to market exchange may be involuntary, a cost or a benefit. For instance, information technology makes it easier to manipulate knowledge goods since they are reduced to a single dematerialised form expressed in digits. Also, many devices have become accessible to the public at large, increasing the trend. Unlawful actions, such as unauthorised duplication of copyright materials, add external costs to the market which need to be internalised. This may be considered harmful to the copyright owner but beneficial to users. The reasons why markets fail in the presence of such external costs is that generators of externalities do not pay for harming others since they do not take part in market formation. In terms of economics, the sum of all private costs added to the additional costs created by free-riders cannot equal the private marginal cost of the producer, which results in market failure. Consequently, private markets do provide inefficiently at private levels and even less efficiently at social levels. What society wants is that its social level is optimal. In order to achieve a social optimum, it is then necessary to induce private profit-maximisers to produce information to the socially optimal and not the privately optimal point. Thus, prices are raised in order to cover the difference, since temporary and artificial monopolies are created. Clearly, copyright in doing so does not attempt as such to internalise such costs creating inefficiency, but simply provides a tax on society as a form of compensation which raises prices. Imposition of such an economic system has been possible on tangible commodities; however, it is hardly feasible with modern information technology,

since control over material duplication is lost. In other words, the problem of externalities has never been cured and has become more acute since new technologies have questioned the practicality and rationales under which copyright provisions are based upon, in particular printing technology. Consequently, I will look for a social optimum which is achieved only when externalities are internalised in the sense that the private producer takes them into account. That is a new approach toward intellectual property rights.

I have so far focused much attention on property rights analysis. However, any attempt to explain intellectual property rights needs to take adequately into account the central role of scarcity in the emergence of rights and the difficulties inherent to its application to knowledge goods. It should be clear that scarcity does not apply to ideas. It is self evident, as Thomas Jefferson stated, that:

> "If nature has made any one thing less susceptible than all others of exclusive property, it is the action of the thinking power called an idea, which an individual may exclusively possess as long as he keeps it to himself."[58]

From the moment one individual delivers his thoughts to the public, another individual is free to use his ideas. It would be in practice impossible to restrain anyone from using disclosed ideas. Also, identical ideas may spring from several people at the same or a different time. As a result, restricting access to ideas would be fundamentally wrong because it would result in preventing others from freely exercising their right of thinking. Consequently, ideas are inherently not scarce in either static or dynamic manner. It should be stressed that the notion of scarcity is not a question of material or of immaterial form, but solely a question of material

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[58] Thomas Jefferson, "*Letter to Isaac McPherson*, Monticello, August 13, 1813", in *The Writings of Thomas Jefferson*, Vol.XIII, (A. Lipscomb ed. 1904), at 326-38.

availability. For instance, the issue arises in looking at books as instantiations of ideas in material form. In static terms ideas cannot be scarce; however, in dynamic terms their access may be restricted due to copyright provisions. In other words, dynamic scarcity applies to the tangible instantiation or embodiment of knowledge. While this differentiation exists economists have been insisting only on the latter in analysing intellectual property rights. Arnold Plant expressed his astonishment, pin-pointing the institutionalisation of the situation:

> "It is a peculiarity of property rights in patents (and copyright) that they do not arise out of the scarcity of the objects which become appropriated. They are not a consequence of scarcity. They are the deliberate creation of statute law; and, whereas in general the institution of private property makes for the preservation of scarce goods, [.....] 'to make the most of them,' property rights in patents and copyright make possible the creation of scarcity of the products appropriated which could not otherwise be maintained"[59]

Intellectual property rights have become accepted and legally enforced out of the contention that incentives for innovation and creativity "could not be otherwise maintained", if not eliminated. The problem of lack of scarcity has been used to support monopolistic means of property. Also, the creation of exclusive monopoly rights on works of the mind evolves from contentions which inherently wish to ascribe public attributes to expression of ideas.

A common, collective, or public good is defined as any good which cannot feasibly be withheld from individuals.[60] Being a public good means that production, for instance of books, entails the creation of external effects which prevent private investors from producing. In principle public goods can be consumed by any

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[59] Arnold Plant, *The Economic Theory Concerning Patents for Inventions*, (1934), at 36.

[60] Mancur Olson, *The Logic of Collective Action Public Goods and the Theory of Groups*, Harvard Economic Studies, Vol.124, (Cambridge Mass.: Harvard University Press, 1965), at 14.

additional users at virtually zero marginal cost.[61] Copyright monopoly seeks to create scarcity to facilitate their appropriation in order to provide enough incentives to producers of such goods. Nonetheless, I have argued that there exist opportunity costs of acquisition for ideas because, as I have already contended, there are always opportunities for exclusion, such as prohibitive pricing schemes, and also because public goods are not equivalent to free goods. The public element of ideal goods must be embedded in a tangible substrate before they can be consumed or enjoyed. Also, it has been noted that "publicness" is not a characteristic inherent to goods. The public nature of knowledge goods is a function of the manner in which they are produced, in other words the choice of the relevant marginal unit, rather than their capacity to support free goods such as ideas. As Tyler Cowen concluded:

> "publicness is an attribute of institutions, not of abstract economic goods. Every good can be made more or less public by examining it in different institutional contexts"[62]

Consequently, a distribution system that allows private consumption or a system that allows public consumption antedates the classification of a good as private or as public. Therefore, the fundamental issue which is faced by society is not how to provide enough economic incentives but:

> "Rather, we are faced with an unavoidable choice regarding every good or service: shall everyone have equal access to that service (in which case the service will be similar to a public good) or shall the service be available selectively: to some but not to others? In practice, public goods theory is often used in such a way that one overlooks this important choice problem."[63]

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[61] T. Brennan, *Harper & Row v. The Nation: Copyrightability and Fair Use*, U.S. Department of Justice, Economic Policy Office Discussion Paper (EPO 1984-85), May 11, 1984, at 8.

[62] Tyler Cowen, *Public Goods and Their Institutional Context: A Critique of Public Goods Theory*, 43 Review of Social Economy 1985, at 53.

[63] Kenneth Goldin, *Equal Access vs. Selective Access: A Critique of Public Goods Theory*, 29 Public Choice 1977, at 53.

Society itself gets confused between restrictions imposed on access to material expressions and free access to ideas. Information technology, and other devices, have simply made this confusion more acute. Intellectual property rights are the reflection of society's evaluation of its cultural and scientific heritage, and development. Communal ownership of intellectual products of the mind dominated ancient society as well as the Middle Ages to give way during the Renaissance to a more individualistic perception of intellectual ownership. Ultimately, the problem which society has to face is whether intellectual property should follow the more economic-driven copyright law system or author-oriented contender, the *droit d'auteur*. With the advent of information technology, only a system which is technology neutral and which recognises creators' contribution to society will be fit to serve society's goals: wider access to its heritage.

Providing services or producing goods includes not only capital, marketing, and other cost components, but also fencing, or exclusion costs as well. Copyright in that sense permits to fence or prevent people from pirating others peoples works. Dematerialisation of forms of expression has not only facilitated transmission and manipulation of knowledge but also plainly reduced costs of production. It should be stressed that costs of exclusion are involved in the production of virtually every good imaginable. This decision is itself the relevant factor in converting a potential public good into a private good. Above all, such a decision depends simply upon the assertion that given a knowledge good for which the marginal cost of exclusion is greater than the marginal cost of provision, it is inefficient to expend resources to exclude non-purchasers. In reducing costs, information technology brings new

opportunities for fencing strategies. Similarly, choices will have to be made as to what extent access to knowledge goods will be open. The politicisation of goods, in other words the decision to provide knowledge goods on a non-exclusive and available-on-demand basis either for free or in exchange for the payment, directly concerns the future of society's cultural and scientific knowledge. Society made a choice in late medieval times to impose monopolies in the form of copyright because fencing was too prohibitive in order to increase its knowledge. As a choice of distribution which creates public goods, it occasioned free-riders which in turn has been used to demonstrate that private markets unaided could not satisfy properly demands.[64] Moreover, it should be understood that public provisions such as copyright have not eliminated costs of exclusion, although they have changed the structure of imposition on users. Tax collectors, state surveillance of economic transactions of every sort, and jail sentences have simply replaced voluntary arrangements between parties. Furthermore, enforcement of intellectual property rights has been framed in purely static rather than dynamic terms, since none of the provisions take account of the production process.[65] With regard to information technology, questions arise whether it would be inefficient to expend resources and exclude non-purchasers. In my opinion, it could be efficient since the marginal cost of making a given knowledge good to one more person could be more than the cost of exclusion. Production poses the problem of how best to produce knowledge goods, taking into account all the relevant costs and benefits. Copyright has supported arguments for a method of

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[64] Boudewijn Bouckaert cited in Tom G. Palmer, *Intellectual Property: A Non-Posnerian Law and Economics Approach*, 12 Hamline Law Review 1989, at 285.

[65] A. Alchian & W. Allen, *University Economics*, 3rd ed. 1972, at 147-48, 245-47.

production that assumes that the good is already produced. That is no argument at all. Exclusion devices should be seen as endogenous to the market. In other words, encryption and encoding devices or other mechanisms may serve to fence the creative domain and should be considered as endogenous of the production process. The advent of information technology integrates such mechanisms inherently. Copyright and *droit d'auteur* alike have supported static answers to market failure and need to reconsider their approach into a more dynamic one.[66] The problem which remains is to define a mode of production which respects the entrepreneurial abilities of potential producers.[67]

Emphasis will now be given to alternative means of internalising externalities within the scope of public provision. Printing has focused the attention of economists, as well as the state, on return for investment in terms of outputs of sale of copies. For instance, the Posnerian position stands on Bentham's contention that for any new work to be created the expected return must exceed the expected costs from the sale of copies. I have already presented the normative theory of Ronald Coase which establishes that assignment of property rights should be the only means available to reach efficiency. I have disputed the application of his theory in the case of copyright since it does not integrate externalities fully in the formation of markets. Nonetheless, Coase has introduced another general rule which needs careful consideration since copyright provisions fail to integrate markets in a dynamic fashion. Moreover, society claims wider access to information via information technology, which brings some

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[66] Besen, *New Technologies and Intellectual Property: An Economic Analysis*, The RAND Corp., IST-8415297-NSF, May 1987, at 4; Brennan, *Taxing Home Audio Taping*, Economic Analysis Group Discussion Paper (EAG 86-6), US Department of Justice, Antitrust Division 26 (April 15, 1986).

[67] Ronald Coase, *The Lighthouse in Economics*, 17 Journal of Law and Economics 1974, at 357.

conflicts between the public and producers of information. Coase has enunciated a general rule which considers two ways in which it would be possible to achieve an efficient solution. One way would be for the law to adopt rules for which the non-cooperative solution would become the efficient one.[68] Accordingly, rules of property rights may be used to induce parties to achieve an efficient solution minimising the harm of free-riders. For instance, one rule may leave free-riders to act freely as they wish, the second one may bring them to court in order to forbid them from pirating, and third rule may force them to participate in sharing the cost of production. Because society's overall goal is to increase its cultural or scientific knowledge, parties would choose the rule or efficient solution which increases the public domain regardless of individual positions. In other words, a co-operative and efficient solution under all three possibilities should in principle always be found. For instance, assume that parties decided to let free-riders be free. The efficient solution should demonstrate that the public, creators and producers altogether gain. The other way to achieve efficiency would be simply for the parties to cooperate when there are no impediments to co-operation. In sum this positive rule contends that when parties can bargain together and can settle their disagreements by cooperation, their behaviour will be efficient regardless of the underlying rule of law.[69]

Consequently, whatever the assignment of rights, the resulting mix of the outputs will be efficient. Accordingly assuming that all behaviours are competitive, all equilibrium allocations will be Pareto optimal regardless of initial endowments. In

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[68] Robert Cooter & Thomas Ulen, *Law and Economics*, (Harper and Colins Publishers, 1988), at 104.

[69] Ibid, at 105.

other words, Coase's principle postulates that successful bargaining cures inefficient law so long as parties can bargain. As a result legal entitlements make no difference to efficiency so long as the parties can cooperate together and bargain to an agreement, although the distribution of the co-operative surplus is affected. This general rule looks as if it is the panacea to market failures. In fact, such a rule is far from being coherent. The fundamental question remains whether there is any need for property rights or property claims since parties may at any time contest whatever are the property titles claimed by opponents and brought to the negotiating table. This situation resembles more the state of nature where efficient use of resources is not found. Consequently, it is doubtful whether all allocations will be Pareto efficient with a large number of participants. Furthermore, Ronald Coase's rule still does not answer to the need to internalise externalities fully. Rules as imposed by a state are static answers to market failure. Nonetheless, I would like to insist that Coase assumes that laws affect the probability that bargaining will succeed by facilitating bargaining. That is a positive point which needs to be carefully considered because private bargaining is unlikely to succeed in disputes involving a large number of geographically dispersed individuals.[70] With a large number of participants, communication costs are high and difficult to monitor, and strategic behaviour may occur. Therefore, legal rules enforced by courts of justice contribute to the efficient use of resources. However, helping parties to find an efficient solution, they form an hypothetical market which should be accepted by parties. Therefore, property rules should be defined to guide and settle disputes only when necessary, since it cannot

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[70] Calabresi & Melamed, *Property Rules,Liability Rules and Inalienability: One View of the Cathedral*, 85 Harvard Law Review 1972, at 1089

replace the dynamic function of markets. Intellectual property provisions may be looked at now under a different angle in light of technological change. Property rights should allow people to bargain around rights, in other words, operate in a dynamic fashion.

In economics the central element in the spontaneous emergence of property rights is scarcity. Free access to information or ideas is fundamentally accepted since they form the national cultural and scientific heritage. Nonetheless, appropriation of the expression of these ideas remains a key element in providing enough incentives to creators. Hayek summarised clearly the dilemma in which society is placed:

> "The difference between these and other kinds of property rights is this: while ownership of material goods guides the use of scarce means to their most important uses, in the case of immaterial goods such as literary productions and technological inventions the ability to produce them is also limited, yet once they have come into existence, they can be infinitely multiplied and can be made scarce only by law in order to create an inducement to produce such ideas. Yet it is not obvious that such forced scarcity is the most effective way to stimulate the human creative process."[71]

In the absence of scarcity, the mere existence of externalities, such as free-riders, does not justify the creation of enforceable property rights in the form of monopolies. Therefore, the problem lies in dealing with externalities in a dynamic fashion. Harold Demsetz has proposed a new approach on the emergence of property rights. He contended:

> "what converts a harmful or beneficial effect into an externality is that the cost of bringing the effect to bear on the decisions of one or more of the interacting persons is to make it worthwhile [...] internalising such effects refers to a process, usually a change in property rights, that enables these effects to bear (in greater degree) on all interacting persons [...] A primary function of property rights is that of guiding incentives to achieve a greater internalisation of externalities."[72]

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[71] Friedrich A. Hayek, *The Fatal Conceit: The Errors of Socialism*, (London: Routledge, 1988), at 6.

[72] Harold Demsetz, *Toward a Theory of Property Rights, The Economics of Property Rigths*, (E. Furobotn & S. Pejovich eds. 1974), at 32.

His proposal insists upon the dynamic internalisation of externalities whereby property rights would stimulate spontaneously the needs of society. This approach differs from Ronald Coase's contentions in the sense that it focuses esclusively on creators of works of the mind and not intermediaries in order to provide optimal levels of information. This approach seeks to "explain the evolution of private rights as a social response to emerging scarcity problems" which provide incentives as a proper system to social needs.[73] I venture to say that Demsetz's argumentation looks like a rejoinder to the approach taken by Ancient Greeks in participating in the *politics* of the city. Citizens gave importance to other citizens contributions because it implied that their own views would be taken into consideration and they would avoid being marginalised in the life of the city. Furthermore, Demsetz, as opposed to Coase, does not imply that the state can simply define property rights in any way as it sees fit and then let the regulated market perform its magic.

What it is important to recognise is that Demsetz does not exclude the necessity of establishing some guiding rules. He objects to property rights that would require massive and continual state interference in the market because it is not consistent with a market system. Identifying potential externalities to advocate the creation of new property rights is unjustified. Moreover, state enforcement of intellectual property rights with regard to high speed electronics and information technology would in effect require so much state intervention in the social process that it could not keep up with the speed of technology developments. What I wish to convey here is that law is a matter of individual claim and information technology has

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[73] Harold Demsetz, *Commentary on Market and Meta-Market*, 1-5 September 1986, Mont Pelerin Society General Meeting.

in effect given such a power back to individuals. Property rights may be enforced by states or international treaties; nonetheless, their establishment evolves out of people's current needs. As Bruno Leoni asserted:

> "The legal process always traces back in the end to individual claims. Individuals make the law, insofar as they make claims"[74]

Furthermore, he included "his warning about the incompatibility of the free market economy with legislation."[75] Ultimately, rights are not creations of the state, bestowed as gifts upon the people by wise and beneficent legislators, but rather the spontaneous product and the basis of a system of voluntary interactions that we call the market.[76] To that effect one may conclude that intellectual property rights "have atrophied, generating substantial rent-seeking and political conflict, as well as numerous restraints on the market process, including restrictions on the introduction of new technologies."[77] Any system of property rights that requires the violation of other property rights such as the right to determine free use of one's own video-recorder in the privacy of his home or to purchase blank tapes without paying a royalty to a third party, is no system of rights at all. By contrast, it has been demonstrated that Roman law in the field of intellectual property followed and validated common practices between artists and *bibliopola*. As Leoni observed, law evolves alongside practice but

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[74] Bruno Leoni, *Lectures*, 2-6 December 1963, Freedom School Phrontistery, Colorado Springs, Colorado which are composed in his book, *Freedom and the Law*, (2nd ed.), (1972); see also, Peter H. Aranson, *Bruno Leoni in Retrospect*, 11 Harvard Journal of Law & Public Policy 1988, at 665.

[75] Leonard P. Liggio & Tom G. Palmer, *Freedom and The Law: A Comment on Professor Aranson's Article*, 11 Harvard Journal of Law & Public Policy 1988, at 713.

[76] R. Sugden, *The Economics of Rights, Co-operation and Welfare*, 1986; R. Sugden, *Labour, Property and the Morality of Markets*, in The Market History, B. Anderson & A. Latham, eds 1986; V. Smith, *Comment*, in Progress in Natural Resource Economics, A. Scott ed. 1985, at 414.

[77] Leonard P. Liggio & Tom G. Palmer, *Freedom and The Law: A Comment on Professor Aranson's Article*, 11 Harvard Journal of Law & Public Policy 1988, at 715.

does not dictate it.[78] Fundamentally, no system of intellectual property is compatible with a system of property rights in tangible objects, especially with a system of property rights to tangible objects based upon one's own body which is at the foundation of the right to property in alienable objects.[79] As Leggett advocated:

> "The mental processes by which [the author] contrived those results are not, and cannot properly be rendered, exclusive property; since the right of a free exercise of our thinking is given by nature to all mankind, and the mere fact that a given mode of doing a thing has been thought of by one, does not prevent the same ideas presenting themselves to the mind of another and should not prevent him from a perfect liberty of acting upon them"[80]

Therefore, proposals to ban or cripple entire technologies, and especially information technology, which can render current intellectual property rights nugatory, would wipe out areas of property rights altogether and cannot be defended in the name of certain established property rights.[81] Copyright as opposed to *droit d'auteur* is extremely limited in its application to information technology. *Droit d'auteur* recognises property rights inherent to the act of creation and not to the production of commodities. Moreover, a system like *droit d'auteur* based upon natural right principles has the fundamental flexibility to work in a dynamic economic approach to markets, since rights are simply secured and not granted by the state.

Richard Adelstein and Steven Peretz have suggested a model for the evolution of property rights in knowledge goods that draws on the Demsetz model but supplements it with an entrepreneurial and evolutionary dynamic in order to explain

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[78] Bruno Leoni, *Freedom and the Law*, (2nd ed.), 1972, at 84.

[79] For a derivation of rights to tangible objects based upon self-ownership, see John Locke, *Second Treatise of Government*, II § 32-40 (1698); for a theory of contract based on transfer of rights to alienable property, see Barnett, *A Consent Theory of Contract*, 86 Columbia Law Review 1986, at 269.

[80] W. Leggett, *Democratick Editorials: Essays in Jacksonian Political Economy*, 1984, at 399.

[81] Thamas, *Record Makers Ban Digital Audio Tape to Protect Copyright*, Financial Times, 8 May 1987; Sanger, *Vexed by Tape Technology*, The New York Times, 13 May 1987, at D1, Col.3.

the emergence of property rights.[82] They have identified two dimensions of the process of market exchange. One dimension identifies and exchanges information with prospective buyers in order to negotiate mutually agreeable terms of trade. The second one transfers control over the resources, on the one hand, while on the other protects:

> "this channel of exchange with buyers against the constant threat of those who would, where possible, breach the channel so as to extract the value of the commodity being traded without purchasing it from the seller".[83]

In other words the market will be able to exclude potential free-riders from enjoying the good without paying for it. Interestingly, the process of technological innovation is assumed to be driven partially by competition exercised among potential sellers, who try to fence access to the goods, and potential free-riders, who try to free-ride their production. As a result,

> "the competition of technologies, in which entrepreneurs attempt simultaneously to overcome the obstacles separating them from willing buyers and to place corresponding impediments in the path of free riders, who are constantly in search of ways to dissipate them."[84]

As regards knowledge goods, changes in technology may allow sellers to embody the good in tangible forms at the same time that they allow users to extract a knowledge good from its tangible embodiment, or host. The former would then reflect the essential properties of private goods, while the latter would take some of the attributes of public goods. Accordingly,

> "intellectual goods can be traded in markets as private goods only so long as the governing technology renders them impure and [...] technological change which purifies the intellectual good will require some kind of collective action to ensure that the incentives to produce and purchase the good in markets are maintained"[85]

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[82] Richard P. Adelstein & Steven I. Peretz, *The Competition of Technologies in Markets for Ideas: Copyright and Fair Use in Evolutionary Perspective*, 5 International Review of Law and Economics 1985, at 209.

[83] *Ibid*, at 213.

[84] *Ibid*, at 215.

[85] *Ibid.*

This model postulates a new type of emergence of property right where externalities are directly taken into account by the market and where creators control with independence the use of their work. Intellectual property rights are therefore independent from property rights in the tangible embodiments of ideas. As with the introduction of copyright, when printing technologies made it easier to extract and reproduce intellectual goods than was the case under ancient methods, the contemporary challenge to intellectual property is the doctrine that users should have the widest possible access to all knowledge goods at the lowest possible cost. Such a claim is consistent with a system where intellectual property rights are in the hands of authors. Moreover, in separating intellectual property rights from property right in tangibles dangers to the liberty of the subject, including freedom of speech and expression in literature and the arts, are reduced.[86] The main attack on the current economic approach is that it is in opposition to the free flow of and access to ideas. New property rights which function as incentives to risk-taking in authorship and production of goods may be needed; however, I venture to advocate that the general framework of the *droit d'auteur* has a sounder foundation in the light of information technology challenges. The concerns of authors and publishers are not necessarily identical, but the economic health and independence of one affects the other. What I will examine is the application of this new approach to the economics of intellectual property rights to the information infrastructure.

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[86] Stephen Stewart, Geiringer Lecture at New York University, 28 Bulletin of the Copyright Society 1981, at 351.

The key feature of intellectual property in knowledge goods is that it is meant to deprive no one of what they would have had in the absence of the owner's creative activity. Accordingly, any property rights which will emerge out of the information infrastructure should not deprive any users of the use of ideas. People have to be able to build upon knowledge in order to further knowledge. In other words, people should be able to bargain around the property rights established, otherwise markets cannot be formed properly. As regards current intellectual property rights, the *droit d'auteur* defends property by treating an author's work not as objects of benefit but rather as subjects worthy of protection for the greater benefit of the many. Consequently, creators are not considered investors in their own creation, but are simply recognised as due a just return from society for their contributions. To that effect, the French approach seems to be more consistent than its Anglo-American counterparts, since *droit d'auteur* protection is extended to an author for his inherent contribution to society's cultural and scientific wealth rather than for strict economic reasons. For instance, French courts have been much more reluctant to extend copyright protection to non-intellectual creations such as computer programs than their Anglo-American counterparts.[87] Emphasis is given to recognition of an author's contribution and not to the economic process of publishing. Therefore, the value of contributions is not assessed by outputs but by the inherent intellectual quality of publications. As a result, French courts have developed specific principles conceptualising authors' moral rights

[87] Robert M. Hurt and Robert M. Schuchman, *The Economic Rationale of Copyright*, 56 American Economic Association 1966, at 423.

and recognising their precedence over temporary exclusive commercial interests since they are not property rights. Also, *droits moraux* are reflections of the author's personality, as opposed to common law moral rights which place moral rights of authors under a commercial bias. In sum, *droit d'auteur* may put information technology to use as a convenient way of fulfilling society's obligation to reward writers for their contribution but independently from any technical form of production or expression. I am concerned here with knowledge goods and not simple information and that these goods are assumed to be willingly supplied or exchanged over the information infrastructure. Therefore, I exclude from in my argument concerns which relate more to privacy and security issues for individuals or states and which are exogenous to intellectual property issues as such.

Problems concerning public good allocation are based upon the free-rider hypothesis, which implies that individual consumers fail "to state publicly their full monetary evaluation of a collective good", preventing markets from forming.[88] It is of importance for this study to re-assess this universally adopted model in the light of a new technological context such as information technology, which is predominantly illustrated by the Internet. This information infrastructure has already affected our civilisation as deeply as Gutenberg's printing press, and will certainly alter our current intellectual property institutions. The Internet may be defined as an electronic superhighway which represents a high capacity multi-media carrier where broadcast, messaging and database communication models converge.[89] Broadly speaking it

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[88] Earl R. Brubaker, *Free Ride, Free Revelation, or Golden Rule?*, 18 Journal of Law and Economics 1975, at 147.

[89] Henry H. Perrit, Jr, *Regulation and the National Infrastructure*, Conference on Business and Legal Aspects of the Internet and Online Services, New York, 30 September 1994 (conference paper

regroups a large number of services such as long-distance computing, information and data transfer. The brainchild of a peculiar military strategic problem at the U.S. Department of Defence, the Rand Corporation elaborated a daring concept upon which the infrastructure is based. The concept postulates a decentralised structure which originally established a post-nuclear command network in order for the military to communicate securely all over the country while traditional communication lines would be in tatters. With no central authority and assumed to be unreliable at all times, the network was designed to transcend its own unreliability as "a true modern and functional anarchy".[90] What I will be concerned with here is whether an open, distributed infrastructure like the Internet can successfully provide optimal levels of knowledge, in other words enough economic incentives for production of knowledge value.

In my opinion this apparent anarchy has already played a decisive role in internalising externalities in a dynamic fashion. In other words, the system has all the potential to correct market failure in providing efficient levels of information which would provide incentives to entrepreneurial creative enterprises. The carrier functions according to unique standard protocols which involve an open and non-proprietary system. Indeed, all nodes are equal and independent which means that they all communicate to each other as peers so long as they obey identical protocols. In fact, this established standard is the unique way in which machines can communicate. To that effect, being neither social nor political but only technical, the protocols have

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available from the World Wide Web page of Villanova University School of Law, http://www.law.vill.edu).

[90] Bruce Sterling, *Short History of the Internet*, The Magazine of Fantasy and Science Fiction, February 1993, column 5.

reduced transaction costs to a minimum since people must obey them. Furthermore, the system is composed of many independent nodes, ranging from supercomputers to home desktops, which means that there is no official entity exercising power over any other. Therefore, strategies for one to take over another are prevented. Each person accessing the highway is responsible for his own machine as well as the maintenance of his own section of line. The Internet is therefore common property. One question immediately arises whether or not "the tragedy of the commons" may occur to the Internet. The tragedy is that commounal ownership, understood as open access to a natural resource, results in over-use and destruction of the resource.[91] One may argue that because the costs of using the Internet are disconnected from the price paid by users, the protocols are "a recipe for gridlocks."[92] According to economist Hal Varian:

> "The average load is not the problem. Most of the time the Net is working at maybe 5% of capacity. But the peak load is a major concern. Service begins to degrade at about 20% of capacity, and the sudden upsurge can make demand jump to that point in an instant."[93]

This analysis needs to be put into perspective. The carrier evolves out of independent nodes which interconnect as a form of goodwill. From this arises a service, the Internet, which sustains a defined level of communication as decided by the technical capabilities of the nodes and dedicated as common property. As a result, technical limits imposed on the carrier are independent from the intermediation service itself. The network belongs to everyone and no-one similarly to a common good; however, it is up-graded by the natural self-interest of its users who in effect are the nodes themselves, and subsequently services available on the network. Nodes, as private or

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[91] see footnote 20

[92] Bridger Mitchell, Inc. 13 June 1995, at 47.

[93] Hal Varian, Inc. 13 June 1995, at 47.

public entities, need to improve constantly their technical facilities in order to be able to provide and receive better information services. It is in their own interest that the infrastructure as an intermediation service works at its best. Also, because nodes are independent entities or public institutions, costs for improving the system should be reflected in prices for accessing the system or supported through taxes. The problem posed by Hal Varian in effect should find its answer among players of the game making possible the existence of the infrastructure.

Thus, Mitchell and Varian are partly right in their analysis; however, they have neglected to mention the interrelated structures from which the infrastructure evolves. A clear line must be drawn between the carrier itself, governed by its protocols and the users who provide or demand information. This unique combination explains the functional anarchy which is the strength of the system but also its Achilles heel. This is where adequate emergence of property rights is fundamental for the protection of its neutrality. Analogically, because protocols are neutral technical keys to access the carrier, the system can act as an intermediation between many participants who are ready to exchange at mutually acceptable rates, given their tastes and technical ability to access the *Internet*.[94] Participants as individuals or groups of individuals are all potential buyers and sellers since they may be information users as well as information providers. As a result, the *Internet* gathers a large number of participants who make decisions by expressing their own self-interests which in effect represent as many potential markets as there are participants. It is at this level that price becomes a concern because it should reflect, not only the cost of maintenance of the

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[94] Earl R. Brubaker, *Free Ride, Free Revelation, or Golden Rule?*, 18 Journal of Law and Economics 1975, at 148.

intermediary-system, but also the cost of providing added value information services. Therefore, in absolute terms the tragedy of the commons should not happen, since the technical capabilities of the system are integrated in the dynamics of exchange without fettering the neutrality of the carrier. In other words, price and technical considerations become exogenous to the *Internet* itself. Nonetheless, herein lies the Achilles' heel of the system. Any attempt to impose a certain order which would affect the anarchic functionality of the system would take the risk of breaking its ability to transcend impediments to co-operation. Issues which reside on the use of the network should be resolved at its source, in other words at the users' level. Various claims are put forward. Business people want the *Internet* for financial opportunities and technical reliability. Government people want it more fully regulated. Academics want it dedicated to scholarly research and exchange of knowledge. Military people want it to be spy-proof. All these interests are sources of conflict which can be reduced to one problem. Because intellectual property represents rights over products of the mind which are not in the public domain, the problem of accessibility is a key element in the formation of intellectual property rights in light of information technology.

There are two aspects to the problem. One is technical and the other relates to the formation of property rights. The free-rider hypothesis focuses on the non-exhaustiveness and non-excludability of collective goods. This means that information is available simultaneously to all, and users who do not provide for the good have an imperceptible effect on the system since the number of participants is extremely large. In theory, there would be no attempt to limit access to such non-

participants because it would be highly costly. However, copyright is one of the remedies to prevent people from free-riding. With the advent of the information infrastructure, technical fencing becomes possible at negligible cost. For instance high powered cryptography is a possible technique.[95] On the one hand, this means that technical means may keep pirates to a minimum which remain imperceptible on the market ; on the other hand, producers of information services are able to manage piracies in such a way that it becomes worth investing in information services. For instance, Internet producers may rely on the computational prowess of computer systems to encode digital files in such a way that only the intended recipient may decipher the encoded files. Consequently, people who provide for the formation of the service will be able to access it. As it has been argued, fencing should be taken into account in the dynamic formation of markets and information technology allows bargaining considering the cost of fencing. Rising costs are associated with movement from the concept of privateness toward collectiveness.[96] Here parties to the bargain use a common good for which costs are internalised in a private manner. Since costs of fencing and impediments to bargaining will be reduced to a minimum, prices will reflect the marginal costs, leading to greater optimal levels of co-operation. While

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[95] A public key method called *Pretty Good Privacy* (PGP) has been freely distributed since 1991 and has aroused much controversy in the U.S. Also, the Clinton Administration has endorsed an encryption scheme based upon a microchip baptised Clipper Clip which hopes to become a national standard for government agents if necessary to decrypt encoded private communications, see Wendy M. Grossman, *Cryptic Code*, Personal Computer World July 1994, at 420-424; Also, a new high technological method of on-line crime has been detected recently. For instance, on 25th December 1994 intruders took over a computer network for more than a day and electronically stole a large number of security programs, see *New Method of Online Crime*, New York Times, Monday 23 January 1995; In the U.K., the Court of Session awarded British Telecom an interdict against a journalist who received from an Internet anonymous source sensitive and confidential information about facilities used by Government and military establishments and personel, see John Robertson, *BT wins interdict against Scots journalist*, The Scotsman 10 December 1994.

[96] Earl R. Brubaker, *Free Ride, Free Revelation, or Golden Rule?*, 18 Journal of Law and Economics 1975, at 149.

mentioning cryptography techniques one cannot elude controversies which arise out of them.[97] For instance, government agencies may want to be able to decrypt messages when necessary, as opposed to creators or investors in services who may want to restrict access. Beyond the claim of the state to have access to such networks, restrictions could act to the detriment of society. Ultimately, what I am concerned with here is freedom of speech and expression, since encryption methods are a way of restricting not only access to, but also dissemination of information. On that particular issue, encryption methods need to be carefully monitored in order to guarantee creation and dissemination of works with promotion of the interest of creators and the public. Therefore, encryption methods are possible threats to the functional anarchy of the infrastructure and therefore, if extended to the intermediation service. It has already been demonstrated that encryption must be taken into account for the formation of knowledge good markets. As a result, I would advocate that markets should be set free from intervention to set up their own encryption means solely at participant level. The market will decide what means of protection are necessary against free-riders without threatening potential users. As a matter of fact, software companies have already combined their forces to develop technical solutions for filtering content and access to the Internet.[98]

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[97] See report of a special panel of, ACM U.S. Public Policy Committee, *Codes, Keys and Conflicts: Issues in U.S. Crypto Policy*, (New York: Association for Computing Machinery, Inc., 1994), also available in electronic format from ACM's Internet host, http://Info.acm.org/reports/c_report.html).

[98] Investor's Business Daily 14 June 1995, A2; Nonetheless, in the U.S. the National Information Infrastructure Forum has already proposed the creation of a new federal agency to monitor electronic baking and other transactions, and provide security against computer break-ins recommending by the same token criminal and civil laws to control the use of the internet. Not only the Senate has voted overwhelmingly to prosecute users who distribute sexually explicit or other "obsene, lewd, lascivious, filthy or indecent" material over computer networks, see New York Times 15 June 1995, A1, but the federal intelligence agencies have been called upon to share some of their security technology with

In conventional economic terms, the larger the size of the community, the more benefits will be reduced due to large transaction costs. Thus, it is postulated that transaction costs and the non-expression of demand for collective goods lead to a non-optimal level of information because they generate difficulties in handling negotiations. What the new medium succeeds in doing is to facilitate a large number of transactions and to internalise externalities to a large extent. In essence, it may be argued that it reduces transaction costs to zero since the cost of setting up the system is supported by all participants and each individual needs to acquire his own machine to access the network. Therefore the medium facilitates parties' capacity to bargain and use resources at optimal levels. Choice to purchase goods is determined by evaluation of the value of the good. Moreover, in accessing the *Internet* users may interact directly with the service, or bargain, and receive customised services which will maximise their utility. Consequently, it is in the best interest of users to submit to the intermediation service their subjective evaluation of quantity of the knowledge good in order to permit providers to determine an optimal allocation of resources to its production. This may be referred to as "the golden rule of revelation" enunciated by Earl Brubaker.[99] Problems of gathering data and determining the optimal level of information are reduced to the merely technical problem of accessing the system. Traditionally, the simple fact that individuals act in their self-interest gives them no incentive to express their demand for common goods since they can fully enjoy benefits from the good without participating. In our case, the *Internet* allows people to

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industry and government to establish a secure "digital signature", see Wall Street Journal 14 June 1995, B3.

[99] Earl R. Brubaker, *Free Ride, Free Revelation, or Golden Rule?*, 18 Journal of Law and Economics 1975, at 150.

co-operate and may prevent users from accessing the good unless they have voluntarily provided for the good or expressed their demand intention. Potential free-riders cannot also assume that other members of the community will contribute to pay for the good, or that the costs of their free-ride will have no perceptible effect on the community, or that there will always be enough people to make voluntary contributions. One key aspect for the application of the rule is that pre-contract excludability is conditional upon the "golden rule". In order to understand clearly what are the implications of pre-contract excludability in terms of property rights, it is necessary to give the definition of the condition. According to Earl Brubaker:

> "[i]t asserts that under pre-contract group excludability the dominant tendency will be for each individual to reveal accurately his preference for a collective good provided that he has some assurance that others will match his offer in amounts he perceives as appropriate."[100]

Therefore, the rule may apply whenever the individual has reason to count on the community.

This assumes that before accessing or creating the good exclusion is possible. In fact, individuals will have reason to count on the community because fencing is always possible on the infrastructure. Moreover, it has already been argued that costs of fencing should be integrated in the bargaining process at producer level and would provide enough incentives for production of knowledge goods. Also, because the good does not exist, there is simply no possibility to pirate the work. There is no public or private good in existence. Consumption is therefore possible only for the people who have contracted in advance with the service. To that effect exclusion or appropriation is facilitated prior to consummation group-wise and individually.

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[100] Earl R. Brubaker, *Free Ride, Free Revelation, or Golden Rule?*, 18 Journal of Law and Economics 1975, at 153.

Several fundamental conclusions can be drawn in respect to property rights. It has been already argued that the nature of goods, for instance of "publicness", depends upon the manner in which products or services are supplied according to the criterion of efficiency, and especially of fencing. Moreover, I have contended that products of the intellect have to be considered according to the level of knowledge content and their artistic value as defined by creators themselves. On the one hand, knowledge goods can be produced in a marketing mode when it will be worthwhile for creators and entrepreneurs in knowledge goods, in other words more efficient, to produce the good in such manner rather than in a public mode. For instance, producers may work on the basis of pre-paid orders. Because the choice of the marginal unit will reflect the customisation of knowledge products, it is doubtful that once supplied the product will be pirated and therefore become a public good to other users. On the other hand, knowledge goods, for instance with high knowledge content which require large investment before being created, will be supplied in a public mode. These goods will resume the characteristics of publicness where there is no need to restrict access to use the public domain. Such contentions should, it is submitted, respond to the concerns expressed by Professor Henry Perrit to ensure that "public information remains public" and that enough "incentives for producing information value" will be provided on the information infrastructure.[101] The most important aspect of the emergence of such proprietary rights over knowledge goods is that it has to work in hand with

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[101] Henry H. Perrit, Jr., *Key Note Presentation*, Electronic Communications, 10th BILETA Conference, University of Strathclyde, Glasgow, 30 & 31 March 1995; Henry H. Perrit, Jr., *Regulation and the National Information infrastructure*, Conference on Business and Legal Aspects of the Internet and Online Services New York 30 September 1994 (copy available from the World Wide Web page of Villanova University School of Law, http://www.law.vill.edu).

adequate intellectual property rights. Creators receive adequate economic return for their contributions to society, either from private investors or from society. Also, they will be able to claim and enforce their moral rights independently from any commercial pressure. Claims will come from individuals themselves and may be enforced if necessary by courts, since they are simply recognised as their fundamental natural rights. In practice, one can see already the application of such a theory on the provider side. For instance, members of the Association of American Publishers have been highly reluctant to invest in electronic publishing because no copyright protection has been imposed over the network. Now, they have decided to resolve free-rider issues:

> "before copyright infringement on the network becomes very widespread and assumed to be the way the network works. It's a recognition that whereas in the past, publishing members of the AAP have been able to leave technological concerns to suppliers - such as compositors, typesetters and printers - in network publishing, we cannot leave it to others."[102]

Clearly, members are ready to co-operate with creators and define pre-contract excludability in their approach to the market in order to provide electronic publishing products on the network. Clearly, the information infrastructure is far from being a public coercive method of control of markets, but is rather a system open to market opportunities.

In practice problems have already arisen about determining under current intellectual property rights what sort of information should be protected. I wish to bring special attention to the issue of information versus knowledge because it allows us to determine clearly which individual claims intellectual property rights ought to protect in a digital environment. The word information is a term indiscriminately used

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[102] Chronicle of Higher Education 23 June 1995, A18.

for different concepts such as factual information or knowledge goods. With reference to the introductory remarks on knowledge, it is of importance to define clearly both terms in the context of information technology. In order to support my argumentation, I will confine attention to databases which will be extended in the next chapter to computer programs from a legal angle. A fundamental difference exists between individual claims for control over disclosure of medical records and for control of use of works of the mind. The former stem less from a need to promote knowledge but more from a need to control personal information in an electronic milieu. Legitimately individuals have the right to object to invasion of their own privacy and have their consent sought before disclosure of any personal data.[103] By contrast, intellectual property rights ought to protect works of the intellect which have been made public but not the ideas, and raw data whatever their importance might be. Therefore, control over factual information under the form of copyright would result in similar effects to protecting ideas, in opposition to what intellectual property seeks to protect. As such, the strength of information technology is to:

> "allow mankind to transform data into information, which means that the data get a certain meaning, answer certain questions."[104]

Accordingly, the term "information age society" as opposed to common belief does not refer to a society dominated by data or facts but a society which ought to place greater value on information by means of interpretation of data or facts. In that sense, Peter Drucker argued that knowledge is the only meaningful economic resource. Furthermore, he called in 1959 for:

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[103] Raymond T. Nimmer & Patricia A. Frauthaus, *Information as Property Databases and Commercial Property*, 1 International Journal of Law and Information Technology 1993, at 7.

[104] Professor G.P.V. Vandenberg (ed.), *Advanced topics of Law and Information Technology*, (Deventer, The Netherlands: Kluwer Law and Taxation Publishers, 1989), at 1.

> "a change in the meaning of 'knowledge'. In the traditional concept the aim of the systematic search for knowledge, is new facts [...]. In our view of the world, we have moved from cause to configuration. From this shift arose innovation, this shift led to its emergence and gives it power."[105]

As a result, there is a need for "new knowledge, new approaches, new opportunities" a foundation of innovation "to develop new tools, new methods, new methods, distributive systems."[106] Ideas, facts or data gain meaning only when they are put into context similarly to ideas. As a result, confusion arises over the respective claims because information technology blurs the distinction between expression of ideas and ideas themselves and also renders their expression highly versatile. Thus, differentiation in forms of expression is irrelevant in an electronic environment. However, content should be the focus of attention in order to differentiate factual information and knowledge, and to determine what should attract copyright protection. Content may be categorised in separate sets.[107] Factual information which contains minimal or no descriptive form at all which ought to be differenciated from knowledge goods which bring meaning to facts and ideas in a descriptive and analytical manner.

Intellectual property rights are intended to encourage creativity and publication of products of the intellect by attributing exclusive property rights. Moreover, the current system attributes exclusive rights in copies. Some have argued, such as Professor Arthur Miller, that databases are fit to be protected under copyright protection, consequently attributing an exclusive right to reproduce copies.[108] I would

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105 Peter F. Drucker, *The Landmark of Tomorrow*, (London: Heinneman, 1959), at 18-19.

106 Ibid.

107 Raymond T. Nimmer & Patricia A. Frauthaus, *Information as Property Databases and Commercial Property*, 1 International Journal of Law and Information Technology 1993, at 14.

108 Professor Arthur Miller defends CONTU's recommendations to protect computer programs and databases by copyright not only as a scholar but also as "an active participant in the debates,

contend that such a proposition leads not only to an abuse of fundamental principles of intellectual property but also contributes to endanger the concept itself.[109] Limits are set upon copyright claims whereby only expression of ideas is protected. This principle defines major restrictions on the use of "copyright protection" in electronic milieu because raw facts often define the core value of databases. The critical problem has been to decide when a database is more than a mere collection of data. Hypothetically if copyright protects databases, protection would have to vest on the entire "work". In other words, the selection and arrangements of the data would need to be protected simply because it would be impossible to dissociate the data from their arrangement. In principle, copyright protection extends only to those components of a work that are original to the author.[110] Originality requires minimal intellectual creativity from the author which entails personal choices. Presumably, the exercise of that choice cannot be obvious, mechanical and similar to anyone who undertakes the same task. As Jane Ginsburg put it:

> "to the extent that the worth of the work lies in the information, rather than in the form imposed on the facts, the modern copyright emphasis on subjective characteristics fails to secure the commercial value of these kinds of endeavours."[111]

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hearings, and negotiation that led the enactment of the Copyright Act of 1976", see Arthur R. Miller, *Copyright Protection for Computer Programs, Databases, and Computer-Generated Works: Is Anything New Since CONTU?*, 106 Harvard Law Review 1993, at 979-81.

[109] See generally, J.H. Reichman, *Legal Hybrids Between the Patent and Copyright Paradigms*, 94 Columbia Law Review 1994, at 2432.

[110] For instance,the Supreme Court unanimously held that even the white pages of a telephone book were not copyrightable and found them "devoid of even the slightest trace of creativity". Moreover, "the originality requirement ... remains the touchstone of copyright protection" although "the requisite level of creativity is extremely low," the "time-honored tradition does not possess the minimal creative spark required by the Copyright Act and the Constitution", see *Feist Publications, Inc. v. Rural Telephone Service Co.*, 111 S. Ct 1991, at 1296 & 1287-88.

[111] Jane C. Ginsburg, *Creation and Commercial Value: Copyright Protection of Works of Information in the United States*, in *Protecting Works of Fact, Copyright Freedom of Expression and Information Law* E.J.Dommering ed., Kluwer, 1991, at 43.

In a database, data are unchanged but arranged in a form which aims at facilitating their use. Clearly, difficulties arise in applying copyright principles to databases. Curiously, Professor Miller recognises "conceptually complex problems that today's technologies pose for the copyrightability of information packages".[112] It has been argued that intellectual property rights evolve out of the value that individuals attribute to knowledge goods. Therefore it is of interest to understand what makes factual databases valuable.

A database is simply a unique organisation which avoids deviating from standard practice.[113] Intellectual property seeks to protect descriptive or original expression. Creators of databases simply arrange the data in ways which facilitate their use. Thus, data are the important items in a database but not their arrangement. Consequently, the act of copying data could not be considered an infringement of the expression of data. Moreover, alleged copies would offer nothing more than mere facts of no inherent value expect in considering expenses for collation. Furthermore, in technical terms the act of downloading data reduces itself only to sub-select data sorted according to criteria chosen by the person who does the act of selection. In such a case, I would not venture to determine who is the real "original" author of the data in intellectual property terms. Some arguments may look at the range of the duplication but it would again miss the fundamental value of databases, which is the ability to compile and make accessible updated factual information. The threat is not to copy the data but to access and downloading without authorisation. Therefore, neither the

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[112] Arthur R. Miller, *Copyright Protection for Computer Programs, Databases, and Computer-Generated Works: Is Anything New Since CONTU?*, 106 Harvard Law Review 1993, at 1041.

[113] Raymond T. Nimmer & Patricia A. Frauthaus, *Information as Property Databases and Commercial Property*, 1 International Journal of Law and Information Technology 1993, at 17.

parameters for protection nor the substantive rights granted by copyright match the needs of electronic databases. Moreover, what I wish to argue is that commercial value should not influence attribution of copyright protection as a default one-size-fit-all system, and especially attribute authorship to works with no intellectual content. For instance, in *Feist Publications, Inc. v. Rural Telephone Service Co.*, the U.S. Supreme Court has recognised that the "classic formulation" of the "sweat of the brow" has "numerous flaws, the most glaring being that it extended copyright protection [...] beyond selection and arrangement [...] to the facts themselves."[114] In other words, the viability of copyright law itself is questioned. Furthermore, chapter three enounciates the fundamental differences which exist between copyright law and *droit d'auteur*. As opposed to copyright law, its French counterpart does not attribute authorship upon commercial considerations but upon natural right principles independently from technology or modes of distribution. Accordingly, I venture to say that *droit d'auteur* has the fundamental prerequisites to establish intellectual property rights in product of the intellect over the information infrastructure. At this point, I wish to clarify my argumentation. I do not refute the right for authors to be compensated for their contribution to society. My purpose here is to demonstrate that the superior interest of authors in being recognised as such strengthens their right to be compensated.

Important considerations can be drawn from this analysis with respect to intellectual property claims in electronic milieu. Unlike printing, electronic dissemination does not involve publication of copies. Consequently, claims of

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[114] *Feist Publications, Inc. v. Rural Telephone Service Co.*, 111 S. Ct 1991, at 1291.

intellectual property rights in electronic milieu can no longer be an exclusive right to reproduce commodities for sale. To that effect, the right to control access has become the claim which individuals will put forward. Intellectual property seeks to provide protection over original expressions of the mind which are not in the public domain. One may differentiate property claims based upon a right to control access to databases and knowledge work. The difference lies in the substantive rights which protect products of the intellect, ensuring qualitative electronic publishing with respect to originality, integrity, accuracy, and traditional recognised moral rights. As opposed to property claims in databases, limited to rights of access, intellectual property in extending its protection to moral claims allows the user to use ideas freely and therefore protect the public domain. Accordingly, incentives to creativity will reflect the irrational aspect of the creative process as well as the rational behaviour of individuals who maximise their utility. Two modes of production will open opportunities for creators and investors in products of the intellect to bargain around intellectual property rights and ensure dissemination of such products. It has been argued that in the case of private knowledge goods, provision of goods would be customised, so that, it would be unattractive for others to acquire, even for free, goods designed for others. Also, users acting in their best interests should be reluctant in sharing goods they have provided for with others, since it would simply reduce their utility function. Thus, investors in knowledge goods should find enough incentives in producing electronic services. As regards high-content knowledge goods, their production will be ensured by public or private procurement in the most efficient mode. Some scientists have already lead the way in on-line publishing, recognising

that the peer review process enabled by electronic publishing can be just as thorough, if not more efficient, than print journals, ensuring high credibility.[115] Furthermore, scholarly and scientific research costs and publication costs can be reduced for the greater benefit of research and society. Moreover, since recoupment of investment will be adjusted to the marginal cost of production, the duration of the economic right of protection should be reduced to the length of time necessary for doing so. A less lengthy period would allow more dissemination of works or distribution of knowledge goods.

In sum, intellectual property seems to comprise two modes of legal protection, one for authors, and another to cover access, distribution and manipulation of works of the mind in which authors play the central role in the emergence of property claims.[116] In other words, information technology has created a new medium of production and new conditions for authors and users in which authors and users are parties to the game. Intellectual property needs therefore to be more author oriented since in every user rests a potential publisher.[117] Information technology needs a reduction of the potency of the state to impose laws on the market calling into question the ability of the state to protect property. As I have argued property claims are a matter of individuals which should be supported by state legislation and not as a form of control in order to allow people to bargain around. Concerns may be expressed for individuals themselves in enforcing their rights. It has been suggested by Professor Cornish that:

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115 Business Week 26 June 1995, at 44.

116 Nicholas L. Henry, *Copyright: Its Adequacy in Technological Societies*, 186 Science 1974, at 1000.

117 *Ibid.*

> "The best hope, so far as earnings are concerned, is indeed that interests will be represented through collectivities of authors, composers and artists. This should reduce the pressure for rules concerning copyright contracts which are bedrocked into the general law."[118]

With an enlarged community of authors it becomes doubtful that interests of authors, composors and artists will be comprehensively represented by such collectivities unless choices are made concerning who should receive help in a discriminatory manner. As contended, assertion of property rights is a matter of individual claims and bedrocked rules which are incompatible with a free market economy should fall within the information infrastructure. Such communities are market substitutes which act as markets do, simultaneously enabling the public to use works of the mind and directing compensation toward the creator.[119] Nonetheless, they are likely to be much more expensive and cumbersome than ordinary markets are in an electronic milieu. These devices are also likely to be imperfect market mimics, for nothing calls forth accurate revelation of preferences and costs like a real bargaining situation. Most certainly their administration costs will be high to outweigh the benefits of a given licence; also there will be gaps in covering all creators.[120] Thus, I venture to say that "individuals will continue to fall outside the range of collective bargains".[121] Furthermore, not only might the administrative cost cancel out much of the incentive gains, but incentives themselves may not be low because some potential uses will remain unexploited.

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[118] W.R. Cornish, *Authors in Law*, 58 The Modern Law Review 1995, at 16.

[119] Wendy J. Gordon, *Asymmetric Market Failure and Prisoner's Dilemma in Intellectual Property*, 17 University of Dayton Law Review 1992, at 859.

[120] In his article Douglas Smith defines a "copyright collective" as "an organization to collectively enforce property rights which cannot be economically enforced individually. The point of this definition is to exclude collectives formed solely for the purpose of generating monopoly rent." Clearly, that definition excludes individual claims, see Douglas A. Smith, *Collective Administration of Copyright: An Economic Analysis*, 8 Research in Law and Economicss 1986, at 149.

[121] W.R. Cornish, *Authors in Law*, 58 The Modern Law Review 1995, at 16.

From all this it follows that claims will be individualised within a collectivist framework which will allow society to benefit instantly from works of its members. In 1959 Peter Drucker contended that an innovative organisation will emerge and be characterised by collectivism which he thought more rhetorical than real. Accordingly,

> "The new organisation expresses a dynamic order: it expresses a configuration of wills, decisions, responsibilities the whole of which is much greater that the individual parts."[122]

The community would in practice be a collectivist community limited by individual claims. I venture to say that the information infrastructure has provided the means for society to move towards that goal. As has been argued, society has moved from a collectivist approach towards an individualistic one. Accordingly, intellectual property systems have evolved out of societies' mutation. It may be therefore time to reconsider our current intellectual property system in accordance with society's new goals.

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[122] Peter F. Drucker, *The Landmark of Tomorrow*, (London: Heieman, 1959), at 81.

## *Chapter V*

# INTELLECTUAL CREATION AND COMMERCIAL VALUE : THE DILEMMA *of* COPYRIGHT PROTECTION *of* COMPUTER PROGRAMS

> *"Copyright for computer programs was far more attractive : for a twenty dollars it costs to obtain a copyright registration certificate, one could get immediate access to federal courts and the extensive array of legal remedies against copyright infringement ... without having to go through a lengthy or searching patent examination process. ..., many software producers cast their fortunes with copyright, hoping that the law's easy-going, Holmesian embrace, when coupled with a judicial instinct to extend copyright where no other form of protection was at hand, would protect the investments made in their programs' underlying methods."*
>
> - Paul Goldstein*

With the emergence of a global information infrastructure, intellectual property, and especially copyright, has become of trans-national importance. As a matter of fact, the subject matter has brought considerable attention on trade-related issues. As such the question of the copyrightability of computer programs has concentrated most energies and poses directly the problem of the future of intellectual property in an information technology environment.

The *raison d'être* of copyright is to facilitate the widest possible dissemination of works, and to encourage creativity by economic and moral incentives as well as assuring the owner of copyright an equitable compensation. New creations evolving from the realm of computer science have proven to test intellectual property principles to the limits of their flexibility. Accordingly, the question of the most

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* Paul Goldstein, *Copyright's Highway: From Gutenberg to the Celestial Jukebox*, (New York, 1994), at 204.

suitable form of protection for computer programs has initiated a process which is determinant in approaching intellectual property issues in electronic milieu. Moreover, I would contend that the actual debate has lost sight of what is the inherent purpose of copyright, the protection of a determined value: authorship. Undoubtedly, the digital environment as such has re-enforced the state of confusion about that purpose. As a result, the study of the case of computer programs is crucial in untangling the issues in order to determine the proper intellectual property regime for intellectual creations which evolve in a digital environment.

The application of copyright to computer programs has initiated a threat against the fundamental nature of copyright, namely a process whereby non-literal elements of expression have been found protectable by U.S. courts of law. This trend has clearly surfaced in European courts and will most certainly influence future legislative as well as court decisions. The situation has become critical since certain individuals have acquired powers to stop others from engaging in creative endeavours. Further, a more immediate threat comes from proponents of the application of copyright in computer programs who now advocate the application of copyright in the same terms to digital works.[1] In other words, the future of intellectual property is under attack not only from commercial or political censorship, but more crucially from a self-destructive mode arising from abuses in use of its underlying principles. Freedom and independence to create, according to one's inspiration and one's conscience, and to communicate creations to the public are at stake, and risk wrecking the future of the information infrastructure. Creation must be free in the first

[1] Allen N. Dixon and Laurie C. Self, *Copyright Protection for the Information Superhighway*, 11 European Intellectual Property Revue 1994, at 467.

place to let the public be judge. As such "[a] bad copyright law can destroy that independence, a good one can help to preserve it."[2]

This chapter will attempt to determine what are the fundamental threats which put at risk the principles of intellectual property, and especially copyright. In particular the international relations of copyright will be considered, in order to have a closer look at national legislation and present my dissent from the copyrightability of computer programs. As a result, attempt will be made to determine what is the inherent value of computer programs in order to formulate a new approach towards the protection of works of purely utilitarian features. The case of computer programs will help to illustrate the situation and to make some projections in relation to the information infrastructure. It will be demonstrated that the value of computer programs calls for a different form of protection, separate from copyright law and *droit d'auteur*. This analysis will differentiate works of authorship from works of a utilitarian nature, in order to deduce stable grounds for determining authorship in an electronic milieu.

## THE INTERNATIONAL RELATIONS OF COPYRIGHT

As things stand, there is no such thing as an "international copyright system" that automatically protects an author's creations throughout the world. Protection against unauthorised use in foreign countries depends upon the national legislation where the infringed act occurred. Disparities exist between national laws and the principles they

[2] Barbara Ringer, *Copyright and the Future of Authorship*, Copyright 1976, at 155.

are based upon.[3] Nonetheless, a certain uniformity in national legislation has been initiated since most countries offer protection to foreign authors under certain conditions which have been greatly simplified by supranational arrangements. Two main conventions, the Berne Convention (1971) and the Universal Copyright Convention, gather a large number of countries forming a large consensus upon minimum protective measures due to creators of works of the mind. Moreover, this internationalisation of the subject matter is in constant evolution since countries have been far more concerned with the protection of their own intellectual resources. Nonetheless, such concerns have recently been focused in trade-related issues of a commercial and industrial nature, moving away from fundamental issues concerning the basic rights of authors. Above all, intellectual property has become a key part of trade relations. Knowledge, and especially its dissemination, is a determinant factor not only for cultural development but also economic development of countries, and especially developing countries. On the one hand, the mere existence of unauthorised copies of copyrighted materials in foreign countries may be considered as an unfair form of competition. On the other hand, copyright protection is perceived as an unfair trade barrier for countries which do not have the means to pay the price for western knowledge, and especially technological knowledge, for instance in the case of computer technology.

Moreover, the possibility of piracies has captured the main attention of producers and dominated the debate in legal terms, especially in relation to

[3] There are two main systems described commonly as "common law tradition countries" represented by "copyright law" and "civil law tradition countries, represented by "author's rights", see chapter 2 and 3.

international trade. Curiously researches on that subject have been inconclusive. For instance, WIPO itself has had difficulties in finding cases of piracy at such a large scale that it would threaten the industry. According to the 1978 WIPO report:

> "At no stage in the meetings of the Group was any convincing case ever made out for the proposition that computer software did actually need any additional legal protection; the most the representatives of the computer industry could say was that they 'would like some further form of legal protection.' No documented instances of piracy were adduced; and there was no serious suggestion that technological progress in the software field had been inhibited by any shortcomings there might be in the legal protection presently available."[4]

Therefore, it is of interest to understand why copyright has been chosen as the most suitable form of protection. The main objective has been to be able to keep control of the market by minimising or managing efficiently piracies at least cost but not to curtail piracies. Other forms of legal protection such as trade secrets or patents could have been strong candidates in order to prevent people from "stealing" programs. Secrecy has the advantage of restricting access to the logic, all the more so since once in low level language it is impossible to recreate the program as developed by the programmer. Nonetheless, copyright has been chosen. Some may argue that transaction costs could rise for producers by looking for other legal protections, and would result in an overall price rises.[5] In fact, the current state of oligopoly in the software market proves that other forms of protection could not fulfil producers' main

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[4] CISAC document n° CJL/78/45.266, at 2; similarly, CONTU looked at the possible effect of piracies on the computer industry. However, "In all the months of its hearings and inquiries, this Commission has not been given a single explicit case of computer 'rip-off' that was not amenable to correction by laws other than copyright.", *Dissent of Commissionner Hersey*, CONTU, *Final Report on New Technological Uses of Copyrighted Works*, 31 July 1978 (Washington, 1979), at 30, Hereafter: [contu, 1979]

[5] John P. Palmer, *Copyright and Computer Software*, 8 Research in Law and Economics 1986, at 210, Hereafter: [Palmer J, 1986]

objective : keep control of the market by managing piracies.[6] As Alistair Hirst, a representative at the WIPO discussions, observed:

> "Even amongst those representing the computer industry, there was a singular lack of representation from the smaller independent software houses, who were intended to be the chief beneficiaries of the new software right: those who had the most influence on the discussions were in fact the representatives of the large companies who are in many ways the economic adversaries of these intended beneficiaries."[7]

Such lack of representation may demonstrate a lack of concern from smaller entities about the form of legal protection needed to develop software. Nonetheless, it is sound to argue that strategically small entities want to sell their software for many different lines of hardware, whereas large corporations tend to lock their software within the hardware in order to strengthen their market position, making it an oligopoly which inhibits competition. As Paul Goldstein argued, "many software producers cast their fortunes with copyright, hoping that the law's easy-going, Holmesian embrace [...] , would protect the investments made in their program's underlying methods."[8]

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[6] American software companies supplied nearly 80 % of the world packaged-software market in 1991. Europe buys nearly as much software as its American counterpart; however, it produces only one fifth as much. Some of the difficulties encountered by European companies "no matter how good are their technology, is the fragmentation of the European market. Europe is a patchwork of languages, legal systems, cultures and currencies", see *Europe's Software débâcle*, The Economist November 12*th* 1994, at 101-2; The U.S. Justice Department has been looking at cases of violation of antitrust laws by leading software companies such as Microsoft Corp, and especially in relation to Microsoft network access with Windows 95. Also, Apple's chief executive, Michael Spindler, "has delivered a tirade against Intel Corp. for undermining the economic foundation of the personal computer business". He alleges that Intel makes microprocessors for 80 % of the world's PCs and that dominant position "has more far-reaching consequences on how the PC industry works in its economics than Microsoft does", see *Facing Computer 'Monopolies'*, Herald Tribune July 15-16, 1995 at 9

[7] Alastair J. Hirst, *WIPO Discussions as Representative of the International Confederation of Societies of Authors and Composers*, cited in John Hersey, *Dissent From CONTU's software recommendation*, in *Technology and Copyright*, Georges P. Bush and Robert H. Dreyfus eds., (Maryland, 1979), at 260.

[8] Paul Goldstein, *Copyright's Highway: From Gutenberg to the Celestial Jukebox*, (New York, 1994), at 204.

In 1994, the Uruguay Round of Multilateral Trade Negotiations led to an agreement known as the "Trade Related Aspects of Intellectual Property Rights, including trade in counterfeit goods" abbreviated to TRIPS.[9] This agreement attempts to establish a settlement machinery before the International Court in order to facilitate disputes between countries on trade related aspects. Further, the TRIPS agreement intended to remedy the lack of an effective copyright enforcement mechanism.[10] Disputes over intellectual property rights may be taken to the International Court of Justice at The Hague following Art.33(1) of the Berne Convention. As a matter of fact, not all signatories have ratified the provision.[11] Therefore, the article has become optional since any country ratifying the Convention can declare itself not bound by the provision. Consequently, the GATT agreement should be viewed as a mechanism for arbitration to settle disputes, providing possible sanctions against countries in breach.[12] Moreover, such important steps need to be placed in context, since they are limited in scope. Remedies are not open to the aggrieved right-owners under the GATT agreement or under the Berne Convention. Because they have no self-executing

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[9] The Draft Final contains 28 legal texts which spell out the results of negociations since the Round was launched in Punta del Este, Uruguay, in September 1986. It covers negociating areas cited in the Punta del Este Declaration and as such the *Agreement on trade-related aspects of intellectual property rights, including trade in counterfeit goods*, produced on 10 December 1991.

[10] "Desiring to reduce distortions and impediments to international trade and taking into account the need to promote effective and adequate protection of intellectual property rights, and to ensure that measures and procedures to enforce intellectual property rights do not themselves become barriers to legitimate trade;

Recognising, to this end, the need for new rules and disciplines ...", Agreement on Trade Related Aspects of Intellectual Property Rights, Including Trade in Counterfeit Goods (Annex III), Part I, at 58.

[11] Berne Convention, 1971 (Paris revision), Art 33(3)

[12] "Emphasising the importance of reducing tensions by reashing strenghtened commitments to resolve disputes on trade-related intellectual property issues through multilateral procedures", Agreement on Trade Related Aspects of Intellectual Property Rights, Including Trade in Counterfeit Goods (Annex III), Part I, Part III-Enforcement of Intellectual Property Rights, Part V Dispute Prevention and Settlement, at 58.

character they are open only to states, not to individuals. Furthermore, international conventions like the Berne Convention and the Universal Copyright Convention bind signatories, whereas piracies occur mainly in non-member countries. It should be recognised that GATT procedures are intended to co-exist along with the international conventions. As a result, national laws remain the only efficient means in protecting non-national authors as long as countries have bilateral or multilateral agreements. As such, the conventions may be seen as worldwide protection systems since they are joined by nearly two-thirds of the countries of the world. Nevertheless, a large number of signatories does not prevent great disparities in wealth and in culture among members. As a result, major issues are unlikely to be resolved among signatories or obtain the unanimity required in order to revise the Berne Convention.

The consequences for the subject of intellectual property rights are devastating. The subject has been spoiled by national and commercial interests which in effect endanger the subject matter itself in the light of information technology. In the field of computer technology, and especially computer programs, pressure to apply copyright or *droit d'auteur* has reduced the propensity of their principles to adapt to electronic milieu. By contrast, pressure from other "copyright industries", such as the Press, which have already described themselves as unable to operate profitably without copyright protection of their products, have had a determining effect on economic and cultural national interests.[13] Nonetheless, their voice seems to

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[13] "...the Press is small change compared to the rest of the media, including the entertainment industry, which are absolutely dependent upon intellectual property for the revenues that give the media their present character.", see David Lange, *At Play in the Field of the Word: Copyright and the Construction of Authorship in the Post-Literate Millenium*, 55 Law and Contemporary Problems 1992, at 142.

be unheard even though their endeavours carry definite cultural value suitable for copyright protection and worth protecting at international level.[14] By contrast, the computer industry has been more successful in putting forward its claims even though its products are more of technical than cultural value.[15] In effect, the industry has had its "ways of bringing trade in copyright works within the ambit of the major multilateral trade treaty, the General Agreement on Tariffs and Trade".[16] Accordingly, intellectual property issues, including specific proposals to provide protection for computer software, were scheduled for negotiation in December 1991. As it resulted, a revised text of the proposed agreement on Trade Related Intellectual Property Rights was prepared by the GATT secretariat for review, and it was agreed to provide full copyright protection to computer programs as "literary works" in conformity to provisions of the Berne Convention. The GATT agreement states that "copyright protection shall extend to expressions and not to ideas, procedures, methods of operation or mathematical concepts as such",[17] but computer programs are declared protected "whether in source code or object code", "as literary works under the Berne Convention (1971)."[18] For the first time an international agreement clearly considers "source code" as well as "object code" copyrightable. By contrast the EC Directive on

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[14] Nonetheless, it is worth mentioning that in 1993 during the final GATT agreements the French government succeeded to impose quotas on the importation of U.S. films in the E.C. in order to defend not only European film industry but also, and most certainly, the French film industry.

[15] This issue of the copyrightability of computer programs encompasses another general dilemma where " [f]ew industrial design pass into the realm of copyright; fewer still deserve patent protection. Others, at the whim of the judiciary, are seemingly condemned to a state of limbo between the two: not sufficiently artistic for copyright, and failing just short of patentability, hence, denied any protection.", see Mark A. LoBello, *The Dichotomy Between Artistic Expression and Industrial Design: To Protect or Not to Protect*, 13 Whittier Law Review 1992, at 108.

[16] Stephen M. Stewart, *International Copyright and Neighbouring Rights*, (London: Butterworths, 1989), at 344.

[17] Art.9(2), Section 1, Part I, *Agreement on Trade Related Aspects of Intellectual Property Rights*, Including Trade on Counterfeit Goods.

computer programs, the most integrated legislation at a supranational level, is not even precise as to what shall be protected, leaving the task to the courts. In my opinion, signatories to the agreement have transgressed the purpose and principles of intellectual property rights as a whole. Objections should be raised against the agreement which jeopardises the future of intellectual property in electronic milieu but is also in opposition to society's needs.[19]

Most certainly, research and development in computer programs is costly. Rationally, few people would invest time and money to develop new software unless they have the assurance that they can recover their investment back. Therefore, it can be argued that only a few will invest in computer technologies, namely computer programs, unless a certain return on investment is guaranteed. Some may suggest that restricting the act of copying by copyright protection provides a legal mechanism for securing such return on investment which, by the same token, benefits society by increasing the number of inventions. Nonetheless, it would appear that the industry itself does not believe in such contentions and would admit that copyright does not respond to the problems related to the subject matter.[20] It is clear that fear of competition, especially from Asian competitors, acted as a strong motive to look for an inexpensive and easy means of protection. The focus of the debate has been

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[18] Art.10, Section 1, Part I, *Agreement on Trade Related Aspects of Intellectual Property Rights*, Including Trade on Counterfeit Goods.

[19] Ill-founded conclusions have been drawn from the example of computer programs arguing favourably for copyright protection in electronic milieu, see Allen N. Dixon & Laurie C. Self, *Copyright Protection for the Information Superhighway*, 11 European Intellectual Property Revue 1994, at 467.

[20] "Many computer people will, if pressed, admit that copyright doesn't fit very well onto object, but, they say, patent protection is expensive and time-consuming to obtain, and most programs have only a short commercial life", William S. Strong, *The Copyright Book: A Practical Guide*, 4th ed., (The MIT Press, 1993), at 27, Hereafter: [Strong, 1993]; Also, a survey demonstrates that copyright protection comes at equal rating with trade secret protection, see [Palmer J, 1986], at 212,

whether new rights should emerge, as Professor Cornish puts it, either by emulation or by accretion.[21] In other words, the question is whether *sui generis* or copyright protection is more suitable for protecting computer programs. The question of the most appropriate form of protection for computer programs has been debated for the past twenty years or so. From 1974 to 1978 WIPO worked with an advisory group of non-government experts to prepare a draft treaty and the so-called *Model Provisions on the Protection of Computer Software*.[22] The objective was to define a special form of protection for computer program similar in form to copyright. The draft of the treaty was finally abandoned in 1983 when most members of the expert committee agreed that such special protection was unnecessary. WIPO also carried out a survey from 1979 to be considered in 1985 at a general meeting on the evolution of national legislation or case law for the legal protection of computer software. No definitive conclusion was drawn from the survey, but copyright was thought to be the most appropriate form of protection by a great majority of participants. They opposed the introduction of a *sui generis* legal regime for computer programs, because national copyright legislation operates territorially and international agreements had been made available to protect rather foreign authors. It should be clear that commercial considerations rather than real intellectual property ones had weight in resolving the issue.

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[21] W.R. Cornish, *The International Relations of Intellectual Property*, 52 The Cambridge Law Journal 1993, at 54, Hereafter: [Cornish, 1993]

[22] *Model Provisions on the Provisions of Computer Software*, WIPO Geneva, 1977, cited in Stephen M. Stewart, *International Copyright and Neighbouring Rights*, (London: Butterworths, 1989), at 306.

In my opinion, this international consensus on the emergence of property rights by means of copyright or *droit d'auteur* protection teaches two important lessons. First, latent monopolists, as in to eighteenth-century France and Britain, have deliberately abused the generous principles and purposes of intellectual property. To that effect, it is necessary to untangle the confusion brought up by contenders in favour of copyright protection for computer programs in order to restore freedom of access to ideas and freedom of expression. Following this line of thinking, it is necessary to re-assess correctly intellectual property rights in light of information technology and the immutable principles from which intellectual property rights emerge. Second, on a wider scale it should be recognised that "what currently is missing in our international foundations is a sufficient accord on the proper scope of industrial property, as distinct from copyright."[23] Moreover, confusion has occurred over the proper means of protection because more applications in technical industrial processes use knowledge and data indiscriminately. In other words, protection of the industry is quite a different task from protecting authorship, where the inherent value is distinct. For instance, confusion easily happens in determining what is the inherent value of computer programs which in essence needs to be adequately protected. Thus, granting copyright protection to operating systems, as William Strong contended,:

> "is in effect granting a long-term patent-like monopoly in the machine itself, without requiring the inventor to meet the standards of patentability. This is not healthy for the economy, nor in the long run for the law either. A better solution might be to enact a special statute for software, combining elements of patent and copyright"[24]

Because difficulties in determining that value is heightened by international trade issues, more careful consideration should be given to the value of knowledge in a

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[23] [Cornish, 1993], at 60
[24] [Strong, 1993], at 27.

global information age society. Countries who may be excluded today from accessing the world's intellectual resources may tomorrow restrain others from accessing it. Therefore, as Professor Cornish explained:

> "[i]n any event the object is to find some means which will enable individual countries, in considering the balance of interests between protection of competition in each case, to proceed essentially by emulation rather than by some more or less forced and inappropriate accretion"[25]

As regards works of the intellect, a proper scope of protection will be crucial in the development of all countries. Abuses similar to the field of computer programs may block access to ideas or knowledge. Moreover, commercial pressure in what is already a global information structure should be carefully monitored in order to develop a flexible copyright where people can have open access to the world's resources as well as being compensated for their contribution to this international wealth.

## DISSENT FROM THE COPYRIGHTABILITY OF COMPUTER PROGRAMS

The impulse for copyright protection of computer programs came from the United States. Following the recommendations of the National Commission on New Technological Uses of Copyrighted Works (CONTU), the U.S. Congress amended its 1976 Copyright Act in 1980 to embrace computer programs expressly within the scope of literary works. As a matter of fact, Congress brought up the issue of computer programs as early as 1976. With respect to computer programs, Congress decided not to legislate immediately on technological issues and vested CONTU with

[25] [Cornish, 1993], at 61.

the responsibility to explore and formulate policy.[26] Nonetheless, Congress had already expressed its intention to cover them as literary works "to the extent that they incorporate authorship in the programmer's expression of original ideas, as distinguished from the ideas themselves".[27] In amending the 1976 Act, Congress made clear that, although not expressly listed among the seven categories of copyrightable works, computer programs were eligible for copyright protection as literary works. Consequently, it was left to federal courts to determine what was entitled to copyright protection. At first, courts sought to distinguish between source code and object code but soon rejected the distinction and held that programs in source code and in object code were equally copyrightable.[28] With respect to the distinction to operating system programs and application programs, the courts found a distinction without a difference of treatment.[29] Moreover, programs were to be protected regardless of whether they were stored externally or permanently in the memory of a computer. Nonetheless, the question has persisted whether the non-literal elements of a program such as its structure, sequence and organisation are copyrightable. In other words, difficulties arise over whether, as with any other literary work, a computer program is entitled to protection not only for its literal language, but also for original non-literal elements of structure.

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[26] Arthur R. Miller, *Copyright Protection For Computer Programs, Databases, and COmputer-Generated Works: Is Anything new since CONTU?*, 106 Harvard Law Review 1993, at 1979, Hereafter: [Miller, 1979]

[27] U.S. House Report nº 94-1476, 3 September 1976, at 54.

[28] *Williams Electronics, Inc. v. Artis International, Inc.*, 685 F.2d 870 (3rd Cir. 1982); *Apple Computer, Inc. v. Franklin Computer Corp.*, 714 F.2d 1240 (3rd Cir. 1983), *cert, denied* 464 U.S. 1033 (1984); *Apple Computer, Inc. V. Formula International Inc.*, 562 F.Supp. 775 (N.D.Cal. 1983).

[29] For instance in *Whelan* the court without any copying of the program code, appropriation of the structural aspects of a program constituted infringement, see *Whelan Associates, Inc. v. Jaslow Dental Labaratory, Inc.*, 797 F.2n 1224-25 (3rd Cir. 1986, cert. denied, 479 U.S. 1031 (1987).

Clearly, national and commercial interests have played an important role in the process of embracing computer programs as literary works. Nonetheless, I venture to say that such interests do not explain how proponents of the copyrightability of computer program persist even though courts struggle with the subject matter.[30] With the question of computer programs and copyright in the courts since CONTU, two points have to be made which will lead to a critical third one. Fundamentally, copyright does not fit the needs of computer programs, and so courts will always have trouble in defining the proper scope of protection. Application of the idea-expression dichotomy is not feasible because copyright is not intended to protect the inherent value of computer programs. On the specific aspect of idea-expression dichotomy, a separate section will determine specifically in technical terms why the doctrine cannot apply. Therefore, I would not even attempt to prove that courts are not "capable of understanding the technology, applying the doctrine to it".[31] Following that line of thinking, there is a practical point which has to be made. In the field of intellectual property rights, courts whether from the common law or the civil law tradition have the duty to implement legislation voted by parliaments. To that effect, courts have been placed in a situation, whether they like it or not, to fit a round peg in a square hole.

Nonetheless, one may argue that the U.S. Supreme Court has the duty to check whether any law passed by Congress respects the U.S. constitutional

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[30] Professor Miller was appointed a CONTU Commissionner and believed then as he believes now that "CONTU made the right decision in treating computer programs, databases, and computer-generated works as copyrightable material", see [Miller, 1993], at 981.

[31] [Miller, 1993], at 992.

provisions.[32] Thus, one may rightly assume that following the case *Feist Publications, Inc. v. Rural Telephone Service Co., Inc.*,[33] courts would conform to intellectual property doctrine as defined by the constitutional mandate, and therefore the law itself would be rightly suitable to computer programs. On the contrary, as has been already argued, the constitutional mandate has never been applied properly and leads to unsatisfactory decisions from the courts.[34] The U.S. copyright system has to be analysed as a system composed of two bodies of laws which represent a transitional step between instrumentalist copyright mechanisms and natural right ones. As a result, claimants for copyright protection may easily extend their rights over the domain of ideas, and especially in our case to object code or operating systems. Under a normal instrumentalist or natural right system, such extension would be prevented following the principle of public domain which developed the doctrine of idea-expression dichotomy. Because U.S. copyright attempts to protect an author's

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[32] "resolutions reached by legislators and judges are legal resolutions that possess no independent claim on truth". As a result, a federal court decision remains the law until an appellate court decides otherwise. Then, the Supreme Court may change the law as could Congress if it desagrees with the Supreme Court result. Following this line of thinking Congress has the last word, and I venture to say that the constitutional mandate is interpreted according to the public interest polity decided by the strongest forces in presence, see Paul Goldstein, *Copyright's Highway, From Gutenberg to the Celestial Jukebox*, (New York, 1994), 17.

[33] The U.S. Supreme Court decided that copyright law did not protect the white pages listings of a telephone book. This decision confused an important area of copyright law in relation to application to factual compilations, see *Feist Publications, Inc. v. Rural Telephone Service Co.*, 111 S.Ct. 1282 (1991); Alfred C. Yen, *The Legacy of Feist: Consequences of the Weak Connection Between Copyright and the Economics of Public Goods*, 52 Ohio State Law Journal 1991, at 1345.

[34] In March 9, 1995, the Court of Appeal held in *Lotus v. Borlan* that the Lotus menu command hierachy is uncopyrightable subject matter, see *Lotus Development Co. v. Borland International, Inc.*, 1995 U.S. App. LEXIS 4618. On July 2, 1990, a district court held that the Lotus 1-2-3 "menu structure, taken as a whole - including the choice of command terms [and] the structure and order of those terms" was protected expression covered by Lotus's copyrights, see *Lotus Dev. Corp. v. Parperback Software Int'l*, 740 F.Supp. 37, 68, 70 (D.Mass.1990). Moreover, in "*Feist* the Supreme Court adds to the constitutional text a requirement of creativity" which in effect considers that industrious labour is not enough to attract copyright and thus getting away from instrumentalist grounds based upon the "sweat of the brow" doctrine, see Jane C. Ginsburg, *No "Sweat"? Copyright and Other Protection of Works of Information After Feist V. Rural Telephone*, 92 Columbia Law Review 1992, at 367-68; see also the constitutional debate posed by CONTU, [CONTU, 1979], at 14-15.

investment as well as his subjective creativity, and because difficulties arise in differentiating ideas from expression in electronic milieu, many people are convinced of the copyrightability of computer programs. More importantly, U.S. copyright fails to secure the value of works in electronic form.[35] Also, combined with commercial pressure emerging from the computer industry, U.S. copyright has taken force as precedent for other legislation.

Similarly, the gradual expansion of the subject to European national laws succeeded in imposing copyright protection on computer programs, following a combination of factors which have already been argued. Moreover, the European Community acted directly on 14 May 1992 to eliminate any doubts on the subject by introducing a Directive to that effect.[36] The British Parliament had already introduced changes to bring programs within the scope of copyright before the 1992 European Council Directive required member states to incorporate its provisions. Parliament's intention was to catch up with technological change as well as to afford protection to new forms of expression.[37] Nonetheless, I would stress the fact that the new Act has not been reformed but simply rejuvenated to be typical of an "old strain of common law thought which sees no difference of kind between true creators and investors in

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[35] Jane C. Ginsburgh, *Creation and Commercial Value: Copyright Protection of Works of Information in the United States*, in *Protecting Works of Fact, Copyright, Freedom of Expression and Information Law* (Kluwer, 1991), at 43; Bradford P. Lyerla, *Copyrightability of Software User interfaces: The Natural Law Versus the Social Utilitarian Approach*, 10 The Computer Lawyer 1993, at 21.

[36] The Council Directive announced its intention "to harmonize Member States legislation regarding the protection of computer programs in order to create a legal environment which will afford a degree of security against unauthorised reproduction of such programs", Council Directive of 14 May 1991 on the Legal Protection of Computer Programs (91/250/EEC), Official Journal 1991, L122/42.

[37] "An Act to restate the law, with amendments; ... to make provision with respect to devices designed to circumvent copy-protection of works in electronic form", CDPA 1988, c.48; see also "Computers, databases and related technology", Department of Trade and Industry, (*White Paper*) *Intellectual Property and Innovation*, Cmnd 9712, (London, April 1986), 50-51.

the creations of others; and which is inclined to prefer the latter to the former."[38] This move has been of importance, since the distinction between the copyright of creators of traditional forms of expression and that of entrepreneurial forms has been eliminated in order to open the Act to more commercial endeavours. Furthermore, the Act ought to be defined as a more conventional instrumentalist act than its U.S. counterpart, which lists works and subject matter governed by copyright indiscriminately. As a result, any creative intellectual activities may secure copyright protection so long as such creations satisfy a minimum standard of effort defined as "skill", "selection", "judgement", "experience", "labour", or "capital" produced by the creator.[39] Following this line of thinking, it would seem an easy task to include computer programs within the list of literary works and let UK court determine what is an infringement of copyright in a computer program.

Because copyright evolves from the printing press, expression of literary works covers any works expressed in material form, print or writing, whether or not the quality or style is high.[40] Since computer programs reach electronic forms and are written directly on computer, there is no tangible form of expression. Therefore it could be held that copyright is not a suitable form of protection for the subject matter. Such argumentation does not hold. It is not because copyright protects tangible forms of expression that programs cannot be protected. For instance, music recorded on a digital disk is protected by copyright.[41] Moreover, the problem of tangibility is a

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[38] W.R. Cornish, *Intellectual Property Rights*, (London, 1989), at 265, Hereafter: [Cornish, 1989]

[39] *ibid*, at 268.

[40] Peterson J, *University of London Press v. University Tutorial Press* [1916] 2 Ch. 601 at 608 cited in [Cornish, 1989], at 268

[41] The Act hold that storage of works on any electronic medium shall be protectible: "... This includes storing the work in any medium by electronic means", Art.17(2), 1988 CDPA.

separate issue referring to the fundamental principle whereby copyright protects investment in commodities which need to be tangible in form. Here the central issue is not the mode of communication in electronic milieu but the quality of literary work applied to computer programs. Thus, difficult questions arise not only on the application of copyright to either source or object code but also in respect of the doctrine of an idea-expression dichotomy.[42] A minimum degree of "literary" composition or "skill, judgement and labour" is necessary as proof of originality. The expression does not need to be of a novel form but simply not a copy of another work or originate from the author himself.[43] Skill, judgement and labour may certainly be required to develop computer programs, but programming languages are far from representing forms of cultural originality. In practice, early U.K. courts decisions embraced a U.S. approach to the question of copyright infringement.[44] As a result, such complacency, I venture to say, either reflects the difficulties in applying

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[42] Alan Bundy & Hector MacQueen, *The New Software Copyright Law*, 37 The Computer Journal 1994, at 82.

[43] The intent is to reduce to a minimum the element of subjective judgment in deciding what qualifies for protection to allow protection of investement of labour or capital in literary works, see [Cornish, 1989], at 271.

[44] "Lord Reay, the minister responsible, wrote to one of us (AB) in July 1991 that '[the exclusion of the ideas and principles underlying an interface] is already the case in the UK copyright law' so that 'We have therefore no intention of amending UK legislation in this respect'. However, Lord Reay accepted that some courts 'have taken a very broad view as to what constitutes an infringement of the copyright in a computer programme'. He had no reason to believe that UK courts would follow that reasoning'." "A view, which in the light of "the case *John Richardson Computers Ltd. v. Flanders,* [1993] F.S.R. 497 decided under the old law, "now appears to be mistaken.", see Alan Bundy and Hector MacQueen, *The New Software Copyright Law*, 37 The Computer Journal 1994, at 81; The recent case *IBCOS Computers Ltd v. Barclays Mercantile Highland Finace Ltd*, [1994] F.S.R 275, has, on the contrary, rejected the "look and feel" approach to the question of infringement under the 1988 Copyright Act incorporating the European Directive provisions on computer programs.

"(12) The United States test of abstraction and filtration of the core of protectable expression is not helpful in English law [...] *John Richardson Computers Ltd v Flanders* [1993] F.S.R. 497, Considered.

(13) When deciding whether a substantial part of the work has been reproduced, consideration is not restricted to the text of the code," IBCOS at 277.

copyright to the subject matter or questions the ability of courts to resist commercial pressure.

As regards the French *droit d'auteur*, the introduction of computer programs under the scope of copyright was an arduous task since it did not correspond to the French approach.[45] The revolutionary decrees of 1791 and 1793 had been already revised in 1957 in order to codify an increasing jurisprudence defining the personality concept of authorship as well as to facilitate application of international provisions contained in the Berne and Geneva conventions.[46] Thus, the current French copyright law established in March 1957 responded to technical and economic pressure. Like its British counterpart, the Act was revised in 1985 in order to modernise it according to technological change and society's needs as a deliberate move putting culture in the hands of the state and capital.[47] Thus the 1985 copyright law deals directly with the legal protection of *logiciels* "according to the conditions set out in Title V".[48] It has to be mentioned that the 1968 Patent Law rejects computer programs as un-patentable.

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[45] André Lucas, *The Council Directive of 14 May 1991 concerning the Legal Protection of Computer Programs and its Implication in French Law*, 1 European Intellectual Property Review 1992, at 28, Hereafter: [Lucas, 1992]

[46] Claude Colombet, *Propriété littéraire et artistique et droits voisins*, 7e ed., (Paris, 1994), at 7-8, Hereafter: [Colombet, 1994]

[47] "Guardian of the cultural patrimony, promoter of recognized, traditional culture (opera, museum, classical music, dance, theatre), the Ministry of Culture suddenly saw itself taken by the emergence of the new movements (song, rock, jazz, but also advertising, fashion, design) in the new technologies (computer, cable) and assumed a strategic role in the renewal of French industry. At this point, the Ministry of Culture becomes a sort of "Ministry of the Culture Industry" in which its politics becomes integrated into global strategy of the French government.", ministerial communiqué "*Culture et industries culturelles*" delivered by Dominique Wallonin in June 1984 at the *Rencontres franco-québécoises*, cited in Bernard Miège, Patrick Pajon, Jean-Michel Salaün, *L'industrialisation de l'audiovisuel. Des programmes pour les nouveaux médias*, (Paris, 1986), at 23.

[48] French law 11th March 1957, *Sur la propriété littéraire et artistique* (nº 57-298), and law 3rd July 1985 "les logiciels, selon les modalités définies au titre V de la loi nº 85-660 du 3 juillet 1985", Art. 3 1957 French Copyright law, *Relative aux droits d'auteur et aux droits des artistes-interprètes, des producteurs de phonogrammes et de vidéogrammes et des entreprises de communication audiovisuelle* (nº 85-660), inforceable since 1st January 1986.

By principle *droit d'auteur* provides no definition of works subject to copyright. Accordingly:

> "[t]he provisions of this law shall protect the right of authors of all intellectual works, regardless of their kind, form of expression, merit of purpose".[49]

Therefore, it could be argued that protection of computer programs should not pose any problem.[50] Opinions were divided whether Parlement should emulate a new form of protection or adapt the current *droit d'auteur*. According to reports drafted for consultation by the *Assemblée Nationale* and the *Sénat* a system of protection modelled upon design protection was under study.[51] The finalised project chose the *droit d'auteur* approach in order to protect computer programs. Undoubtedly, commercial pressure from the computer industry had a positive effect on the final decision. Some voices criticised such a choice arguing the lack of originality and of expression of the personality of the author.[52] As a matter of fact "programs are not simply 'equivalent' to literary works but they are protected 'as literary works'."[53]

As a result, French copyright law modified its provisions according to the special character of computer programs. It should be observed that the 1985 law attributes the right expressly to the employer unless otherwise stipulated.[54]

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[49] "Les dispositions de la présente loi protègent les droits des auteurs sur toutes les oeuvres de l'esprit, quels qu'en soient le genre, la forme d'expression, le mérite ou la destination", Art.2, 1957 French Copyright Law.

[50] An early decision of the Paris Court recognised that a program was a original work of the intellect going beyond stringent and automatic logic and requiring choices, see [Colombet, 1994], at 78.

[51] M. Richard, *Assemblée Nationale report*, n° 2235 (annex to the minutes of the 26 June 1984 session), and M. Jolibois, *Senate report*, n° 212 (annex to the minutes of the 24 January 1985 session).

[52] R. Plaisant, *La protection du locigiel par le droit d'auteur*, Gazette du Palais 1983 n° 2, Doc 348.

[53] [Lucas, 1992], at 28.

[54] "Sauf stipulation contraire, le logiciel créé par un ou des employés dans l'exercice de leurs fonctions appartient à l'employeur auquel sont dévolus tous les droits reconnus aux auteurs", Art.45, 1985 French Copyright Law.

Accordingly, French *droit moral* has been restricted not only due to the commercial character of computer programs but also to the exceptional protection attributed by Parlement.[55] In principle, no limitation in duration of these rights can be imposed,[56] but "unless otherwise stipulated, the author may not oppose adaptation of the software within the limits of the rights he has assigned nor exercise his right to correct or to retract".[57] Clearly, this measure prevents authors from exercising rights which could in practice impede the normal commercial exploitation of computer programs. The author has a right which is entirely in his discretion, but the law requires express provisions in return if it happens. As a result, the author may only claim the right to respect of his name or to prevent false attribution. Moreover, the 1985 law lays down explicitly a special exception to restricted acts:

> "Notwithstanding item 2° in Article 41 of the above mentioned law n° 57-298 of 11 March 1957, any reproduction other than the making of a back-up copy by the user or any use of software not expressly authorised by the author or his successors in title, shall be subject to the sanctions laid down by the said law."[58]

The legislator intended to fight piracies and curtailed another basic principle of French copyright law which allows the making of copies for private use.[59] Moreover,

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[55] "Sauf stipulation contraire, l'auteur ne peut s'opposer à l'adaptation du logiciel dans la limite des droits qu'il a cédés, ni exercer son droit de repentir ou de retrait", Art 46, Title V, 1985 French Law.

[56] "L'auteur jouit du droit au respect de son nom, de sa qualité et de son oeuvre. Ce droit est attaché à sa personne. Il est perpétuel, inaliénable et imprescriptible. Il est transmissible à cause de mort aux héritiers de l'auteur l'exercice peut en être conféré à un tiers en vertu de dispositions testamentaires",("*it shall be perpetual, inalienable and imprescriptible. It may be transmitted 'mortis causa' to the heirs of the authors. The exercise of this right may be conferred on third parties by testamentary provisions*") Art.6, French Copyright Law 1957.

[57] Art.46, 1985 French Copyright Law. Compare with "The author shall enjoy the right to respect for his name, his authorship, and his work", Art.6, 1957 French Copyright Law.

[58] "Par dérogation au 2° de l'article 41 de la loi n°57-298 du 11 mars 1957 précitée, toute reproduction autre que l'établissement d'une copie de sauvegarde par l'utilisateur ainsi que toute utilisation d'un logiciel non expressément autorisé par l'auteur ou ses ayant droits, est passible des sanctions prévues par ladite loi", Art.47, 1985 French Copyright Law.

[59] "Lorsque l'oeuvre a été divulguée, l'auteur ne peut interdire : [...] les copies ou reproductions strictement réservées à l'usage privé du copiste et non destinénées à une utilisation collective [...]", Art.41 (2), 1957 French Copyright Law.

as for software, "[t]he rights afforded by this title shall lapse on expiry of a period of twenty-five years from the date of the creation of the software".[60] Such an exception was based upon the short life expectancy of programs and the otherwise possible long-term monopoly that an author could impose as to maintenance or evolution of computer technology.

Clearly, the introduction of substantial derogations was necessary to open the subject matter of copyright to computer programs, but the question remains whether general principles of *droit d'auteur* can be applied to computer programs. Critics highlight the inherent lack of originality and expression of the personality of the author. Unlike its British and American counterparts, the French concept of originality is viewed in a subjective and not an objective sense. Moreover, unlike industrial property, the criterion of novelty is an objective concept which does not look for originality of form. In my opinion, although *droit d'auteur* has been altered in its principles, conflicts arise because courts have to apply the sense of subjectivity to the fundamental idea-expression dichotomy doctrine in relation to the criterion of novelty attached to industrial processes. It is of interest to cite an *Arrêt* of the *Court de Cassation* in 7 March 1986 which reflects this strange association:

> "Having correctly stated that the scientific character of computer programs is not an obstacle to their protection by copyright, and properly held that the 'composition' of a program may be found in the flow chart and its 'expression' in the instructions, in whatever form they may be fixed, the Court of Appeal made it clear that a computer program is not simply a method of working and that protection must be determined by examining it as a whole. Secondly, in considering, as they were obliged to so, whether M. Pachot's programs were original, the lower court judges decided that

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[60] "Les droits objets du présent titre s'éteignent à l'expiration d'une période de ving-cinq années comptée de la date de création", Art.48, 1985 Title V., French Copyright Law. Also, in order to respect the Berne Convention, the French legislator applied Art.7(4) of the Convention setting exceptions related to applied arts and therefore reducing the normal period of protection of fifty year *p.m.a.*, Art.21(1),(2), 1957 French Copyright Law. Finally, Art.8 of the European Council Directive on the Protection of Computer Programs imposed a 50 year period as from the date of creation of the program, (91/250/EEC), Official Journal 1991, L122/42.

> their author had proved that he had invested personal effort going beyond the simple application of an automatic and constraining logic and that this effort was embodied in the program's individualised structure. In the light of these and its reasoning, the Court of Appeal has legally justified its holding that the programs conceived by M. Pachot bore the mark of his own intellectual contribution."[61]

The Court succeeded in establishing a synthesis between "originality", conceived as personal intellectual effort, and "originality" envisaged as novelty of industrial form. The Court in effect introduced a new approach whereby an intellectual creation may be the result of its creator's intellectual effort and is not itself a copy, considering the "intellectual input".[62] Since then the *Cour de Cassation*, following a 1990 decision of the Grenoble court, asserted in 1991 the fact that the sense of novelty should not as such be taken into consideration.[63] The interpretation insisted upon the fact that there is not only one idea behind the structure of a computer programme but there are several ways of writing a program and therefore each original. As a result, the French legislator has created a new form of protection with the help of courts recognising that the *droit d'auteur* as such is not applicable to the subject matter of computer programs.

Moreover, "[t]he price of this cleverness is an irritating ambiguity", notwithstanding that "[d]iplomatic texts do not necessarily make good legal texts."[64] Consequently, I object to such a solution because it places the emphasis on the expression of instructions and not upon the inherent value of computer programs. Courts will have extreme difficulties, like their Anglo-Saxon counterparts, in

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[61] Court de Cassation, 7 March 1986, Assemblée Plénière, *Maillot Witt v. Pachot* (three decisions), D. 1986.405, cited in 9 European Intellectual Property Review 1986, at D160-61.

[62] "effort intellectuel", Cass. civ., Ass. Plén., 7 March 1986 , conclusion Cabannes, note B. Edelman, cited in [Colombet, 1994], at 83.

[63] Grenoble, (1ère Ch. civ.), 19 Sept. 1989, *R.T.D.* [1990], comments A. Françon, at 387; Ct. Cassation 1ère Ch. civ., 16 April 1991, D. 1992.S.C.13, comments C. Colombet.

[64] [Lucas, 1992], at 29.

differentiating the innovative value of programs which look similar in presentation. It should be stressed that the value of computer programs lies in their efficiency in solving problems, not in the expression of instructions. Cleverness in the combination of "originality" and "novelty" will not suffice to distinguish such a value, because conflicts exist between the subjective sense of "originality" and the subjective sense of "novelty". Nonetheless, what should be highlighted here is the strength of the *droit d'auteur* which lies in its inherent capacity to recognise intellectual property rights out of the simple act of human creation. Transposed to electronic milieu, this principle is able to recognise authorship. In other words, the emergence of author's right is feasible by the fact that *droit d'auteur* can place value on expression of ideas which reflect the personality of their author, whatever is the material or immaterial form of embodiment. Following this line of thinking, this is why the lack of proper definition of computer programs in national legislation is no argument at all in demonstrating that computer programs are not copyrightable. It should be clear that the problem depends upon more fundamental grounds than mere description of what is copyrightable. Because different levels of expression exist in computer programs within a single electronic form of expression, computing principles and instructions are difficult to dissociate. Nonetheless, it is not because digital form of expression complicates the work of courts that authorship cannot be determined adequately. Authorship is attributed to works irrespective to their form, merit or purpose,[65] and "where it is of an original character".[66] Works of authorship are meant to

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[65] Art.2, 1957 French Copyright Law.

[66] "Le titre d'une oeuvre de l'esprit, dès lors qu'il représente un caractère original, est protégé comme l'oeuvre elle-même", Art.5, 1957 French Copyright Law.

communicate ideas and therefore to be accessible to the public either in printed or electronic form. Computer programs are not forms of expression of ideas or principles, and have no needs to be communicated to the public in order to work.

On 14 May 1991 the European Community gave its final approval to its "Directive on the Legal Protection of Computer Programs".[67] The Directive aims to provide consistency among Member States' national copyright laws, in areas such as the classification of computer program as literary work, the definition of originality, a common term of protection within the terms of the Berne Convention, and the controversial permission for reverse engineering in certain circumstances. With the ratification by the Member States' parliaments, there came also an end to a period of very intensive debate not only within the European Community, but also in the United States.[68] In light of the active involvement of the U.S. Patent and Trademark Office in the draft proposal for a Council Directive on the copyright protection of computer programs, it could be argued also that the U.S.A. joined the Berne Convention in 1989 for the purpose of imposing a closer control on its European competitors.[69] Understandably, the software industry was concerned with the protection which was to be afforded to their product. As such the debate was limited to the "copyright proposal" since the Commission chose to follow the accretion

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[67] (91/250/EEC), Official Journal 1991, L122/42.

[68] During the EEC software debate the U.S. Trade Representative and the major sofware American companies lobbied to protect their interests, G. Gervaise Davis, III, *Scope of Protection of Computer-Based Works: Reverse Engineering, Clean Rooms and Decompilation*, in *Reverse Engineering: Legal Business Strategies For Competitive Product Design in the 1990's*, (Epstein & Laurie, 1992), at 45.

[69] The Berne Convention Implementation Act of 1988 has been described as "'minimalist' - amending U.S. law only where absolutely necessary to bring the United States into compliance with Berne structures, and then limiting the amendment's scope to the extent possible", D. Nimmer in M. Nimmer & Geler, *International Copyright Law and Practice*, at USA-8, cited in [Cornish, 1993], at 56.

method most certainly to conform with the international trend which was, moreover the choice of the U.S. Congress. Accordingly, during the consultation process owners of rights and end-users presented their concerns. The most controversial debate raged over the right to reverse-engineer programs notwithstanding written agreements to the contrary when "indispensable to obtain the information necessary to achieve the interoperability of an independently created computer programme with other programs".[70] Fundamentally the subject of debate was whether copyright fitted the needs of computer programs, but all this was argued as if that issue was not debatable anymore and reverse engineering needed a formal consensual agreement from all parties.[71]

In ratifying the Directive, national legislation had to be amended in order to implement the Directive. Many Member Sates had already taken legislative action in the domain. The primary areas of national legislation that EC Member States needed to address included originality requirements, authorship or employee-written programs and the special considerations attached to authors' exclusive rights. It should be stressed that the European Community represents a fair sample of "copyright systems" stemming from two different philosophical sets, namely, common law and *droit d'auteur*. The emergence of author's rights in a large majority

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[70] Art.6, Council Directive of 14 May 1991 on the Legal Protection of Computer Programs (91/250/EEC), Official Journal 1991, L122/42.

[71] After the United States, Japan became the last major industrial nation to abandon its previously declared preference for *sui generis* protection in favour of copyright protection. The 1977 Copyright Act was amended in 1985 to make it more suitable to protect computer programmes and was further amended in 1986 to extend the scope of protection to databases under the title "programmed works". Also, article 2(1) defines the term "proroguramu" as "an expression of combined instructions given to a computer so as to make it function and obtain a certain result", see Stephen M. Stewart, *International Copyright and Neighbouring Rights*, (London, 1989), at 777 & 781.

of European countries respects personality principles which in effect pose problems.[72] The Directive gives no definition of what computer programs are, maybe for the best, leaving national Parliaments free in dealing with the issue. The Directive insists that computer programs include "preparatory design material."[73] Moreover, the Directive does not govern moral rights, not only because the European Community is composed of different sets of legal tradition, but also because their handling is rendered impossible by the manner in which property rights vest. Thus, programs are simply denied any moral rights unless specifically stated in national legislation. Unless a creator of program acts as a freelance programmer, rights vest by contract to employers; also, programs are designed by more than one person. Co-authorship not only complicates attribution of economic rights but also renders management of moral rights highly difficult.[74] Thus, moral rights may be reserved to the employee in the absence of any contractual waiver. In fact, the French legislation itself has restricted substantially the "inalienable" moral rights of author-programmers. Moreover, because the Directive provisions respect the terms of the Berne Convention, computer programs are not required to be protected as such as literary works. According to the Convention, "artistic and literary works" represent "every production in the literary, scientific and artistic domain whatever may be the mode or form of its expression [...]".[75] Clearly, the Berne definition can accommodate computer programs as literary works in order to attract copyright protection.

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[72] [Lucas, 1992], at 28.

[73] Art.1, Council Directive of 14 May 1991 on the Legal Protection of Computer Programs (91/250/EEC), Official Journal 1991, L122/42.

[74] By contrast, Arthur Miller contends that "programming entails a significant degree of individuality". The whole issue remains whether that degree of individuality represents non-obvious or mechanical choices to any other programmer, see [Miller, 1993], at 984.

[75] Berne Convention, 1971 revision, Art. 2(1).

I would insist upon the fact that analysing intellectual property through the prism of commercial interests does not meet society's best interests. What I am concerned with here is not only that commercial interests influence in an excessive manner decisions in the realm of intellectual property, but also that "industrial property" takes precedence over intellectual property.[76] In my opinion, this poses a definite problem for the future of intellectual property, especially in the perception of intellectual property of works of authorship in electronic milieu. There is established case law in the sense here indicated. In *Musik Vertrieb Membran*, a judgement of 1981, the European Court of Justice had already defined its perception of intellectual property. In a reply to the French Government's argument that copyright was not comparable to other industrial and commercial property rights, such as patent or trade-marks, since it aims at preventing distortion, mutilation or other alteration of the author's work, the Court declared:

> "It is true that copyright comprises moral rights of the kind indicated by the French government. However, it also comprises other rights, notably the right to exploit commercially the marketing of the protected work, particularly in the form of licenses granted in return of payment of royalties. It is this economic aspect of copyright which is the subject of the question submitted by the national court and, in this regard, ... there is no reason to make a distinction between copyright and other industrial commercial property rights"[77]

Without any doubt the European Community rightly looks at intellectual property as a possible means for distortion of competition, and especially possible formation of monopolies in information.[78] Nevertheless, emphasis should be placed on the moral

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[76] Valentine Korah, *An Introduction Guide to EC Competition Law and Practice Law and Practice*, 5th ed., (London, 1994), at 204; Johannes Hartmut, *Industrial Property and Copyright in European Community Law*, trans. Franck Dorman, (Neitherlands, 1976), at 55.

[77] Joined cases 55 and 57/80, *Musik Vertried Membran and K'tel v. GEMA*, 1981 E.C.R. at 147, cited in Thijmen Koopmans, *Information Monopolies in European Community Law*, in *Protecting Works of Fact, Copyright, Freedom of Expression and Information Law* (Kluwer 1991), at 83-84.

[78] *ibid*, at 87-88.

as well as economic rights of creators. In looking at intellectual property rights solely as an instrumentalist system, the chances are that in electronic milieu intellectual property will lose its purpose, which is the enlightenment of society. I would therefore question Professor Miller's contention that "copyright principles are flexible enough that it is not necessary to fabricate an entirely different legal regime".[79] Legal regimes such as copyright law, and *droit d'auteur* alike, have their purpose defined by certain principles which define a consistent mechanism. Only the rules which apply these principles may be changed, and ought to change with society's needs. In reference to the economics of intellectual property, it can be intuitively understood that in protecting source code as well as object code, chances to gain knowledge from discovery are reduced to nil. In other words, application of copyright establishes monopoly barriers, annihilating future social benefits. Following this line of thinking, because differentiation between knowledge, data and processes is blurred in electronic milieu, it is of importance to examine the true value of the subject matter in order to determine the appropriate intellectual property regime.

### PLACING VALUE ON COMPUTER PROGRAMS

As we have seen, no definition of computer program has been given. Two relevant problems have impeded such clarification. Not only is it difficult to associate computer programs with literary works, but also the inherent value of computer programs has not been adequately defined. Because the legislator has decided that programs are eligible for copyright protection, a presumption of "originality" exists,

[79] [Miller, 1993], at 981.

resulting in the false assumption that their value lies in their form of expression. As I have argued already, whether expression of ideas is in tangible or intangible form is of no importance. Authorship places value on the manner in which ideas are expressed as opposed to computer programs in which standards functions are arranged in the most efficient manner but not integrated in any form of expression. As a result the criterion of originality refers to the personality mirrored in the work of the mind. What I will be concerned here with is in determining the value of computer programs.

Many definitions attempt to appraise the value of computer programs. In 1977 WIPO offered several definitions for the interpretation of the terms "computer program".[80] It has been defined as a set of instructions capable, when incorporated in a machine-readable medium, of causing a machine having information-processing capabilities to indicate, perform or achieve a particular function, task or result. Also, a "program description" means a complete procedural representation in verbal, schematic or other form, in sufficient detail to determine a set of instructions constituting a corresponding computer program. Thus, "supporting material" means any material, other than a computer program or a program description, created for aiding the understanding or application of a computer program, for example problem descriptions and user instructions. Finally, "computer software" means any or several of the items referred to as computer program and program description. Such definitions are widely accepted at the international level.[81] Clearly, the ground

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[80] WIPO, *Model Provisions on the Protection of Computer Software*, (Geneva: WIPO, 1977), s.1.

[81] Kinderman, *The International Copyright of Computer Software: History, Status and Developments*, Copyright 1988, at 201-203.

covered refers directly to legal terms and especially to legal doctrine which in effect loses perspective of the inherent value of computer programs because its looks at the external aspects. Another approach has been to analogise computer programs with electronic forms of expression attracting copyright protection. For instance, CONTU adopted the view that computer programs, like music recorded on a record, are stored on a diskette. According to the report:

> "Both recorded music and computer programs are sets of information in a form which, when passed over a magnetized head, cause minute currents to flow in such a way that desired physical work gets done."[82]

Furthermore, "the instructions that make up a program can be read, understood, and followed by human beings" and "are *capable* of communicating with humans".[83] Such arguments confuse content with support. Copyright seeks to protect the written content of a book and not the supporting material.[84] For instance, music is in itself meaningful to human reasoning whereas computer programs do not query any judgement of value.

At national level the most influential definition is provided by the U.S. Copyright Act of 1980. Accordingly, a computer programs is:

> "a set of statements or instructions to be used directly or indirectly in a computer in order to bring about a certain result."[85]

Again, this definition attempts to appraise a computer program in legal terms in order to associate its "forms" with copyright. The European Council Directive did not make any attempt to define the term but has simply required national legislatures to bring computer programs under the scope of copyright law as literary works. Nonetheless,

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[82] [CONTU, 1979], at 10, and *Dissent of Commissionner Hersey*, at 28-29.

[83] [CONTU, 1979], at 10 & 21, and *Dissent of Commissionner Hersey*, at 30.

[84] On that specific issue much would need to be said between copyright law and *droit d'auteur*, see chapter 2 and 4.

[85] 17 U.S.C. § 101

an important distinction may be drawn from these definitions between computer "program" and computer "software".[86] The latter has in recent years broadened the scope to include supporting materials which accompany the sale of computer programs and even the content of technologically based communications. In essence "software" combines the complete set of programs and the accompanying documentation explaining how to use them. Therefore, it should be clear that what I am aiming at is defining the value of a "program" and not the accompanying printed documentation. The issue is to appraise the specific executable code modules which operate machines.

All these definitions are simply "based on a simplistic and incomplete understanding of computer technology".[87] Moreover, the wording of the U.S. definition seems to draw from a definition of an "algorithm" but in a simplified version which tries to fit the essence of a program in legal terms. For instance, a dictionary definition of an "algorithm" may be:

> "A set of rules or procedures that must be followed in solving a particular problem."[88]

An expert definition would be:

> "An unambiguous specification of a conditional sequence of steps or operations for solving a class of problems."[89]

Two key elements appear to form an algorithm. A defined function is to be performed and the logic structuring the functions is predictable in its final result.[90] Therefore,

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[86] Both terms are used generally interchangeably, see Chris Reed ed., *Computer Law*, 2nd ed., (London, 1993), at 10.

[87] Andy Johnson-Laird, *Technical Demonstration of 'Decompilation'*, in *Reverse Engineering: Legal Business Strategies for Competitive Product Design in the 1990's*, (Michael A. Epstein & Ronald S. Laurie ed., 1992), at 104, Hereafter: [Johnson-Laird, 1992]

[88] Oxford Dictionary, 1995.

[89] Allen Newell, *The Models are Broken, The Models are Broken!*, 47 University of Pittsburgh Law Review 1986, at 1024, Hereafter: [Newell, 1986]

what is in fact the value of a computer program is the algorithm. As such, the term "algorithm" is possibly more abstract in terms than "computer program" but more precise in its utility, because it is directly integrated to an element called a computer. Thus, no confusion in the nature and purpose of algorithm occurs. Following this line of thinking, it is clear that confusion is brought in the legal arena by the use of numerous terms describing what may or may not fall under copyright protection. From software to computer program to algorithm, there is no lack of words in describing in more or less arbitrary fashion what is a "computer program". If intellectual property, and especially copyright and *droit d'auteur* are meant to protect intellectual forms of expression one should refer to algorithms not as a form of expression but as a sequence of steps designed to conduct a define task. Consequently, in determining what is the value of computer programs one should look at the aim as well as the design of algorithms.

It is necessary to draw an outline of the overall process of computer program development in order to appreciate that value fully. The creative process starts in defining the specifications embodying all of the ideas that form the program. The reasons for creating it, time and space requirements, and the general algorithms are defined in high levels of abstraction.[91] Each of these functions are analysed in detail in order fully to understand step by step all operations or functions to be carried out by the machine. A detailed analysis of different functions may be expressed on paper by flowcharts. Once this analytical step has been completed a programmer will codify

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[90] In "logic", I wish to express the set of rules or principles used in preparing a computer to perform a particular task, see Oxford Dictionary, 1995.

[91] [Johnson-Laird, 1992], at 105 Hereafter: [Johnson-Laird, 1992]

these functions in a computer language called "source code" by carefully choosing symbolic names representing the various functions of the program and sometimes add some personal comments. At this stage of development, a program is encoded as marks on an electronic medium.[92] The value or utility for higher level information is to explain the flow of logic in order to make it possible for humans to understand how the functions are put together and how the program will run. In order to complete this analysis, a programmer has the option to use directly an "assembly language" or low-level of instructions, as opposed to high level language, which corresponds to pure instructions to the central processing unit.[93] With some exceptions, only trained programmers may understand such a language; therefore "copying", in copyright literary terms, is impossible.

In practice, a computer cannot run a programme in "source code". Consequently, a special program is used to translate the "source code file", in text form, in an "object code file" that contains only instructions. The task of translating high-level language to machine language called low-level language is left to a compiler. As a matter of fact, a compiler will not only translate but also re-arrange the source code in order to optimise the efficiency of the program. At that level, all comments and symbolic names used by the programmer have been stripped out since they are irrelevant to the computer.[94] Consequently, it is of importance to understand that the compiler discards all original literary aspects of the source code to add to the programmer's work some object code functions stored in its "internal libraries" in

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[92] [Newell, 1986], at 1028.
[93] [Johnson-Laird, 1992], at 106.
[94] *ibid*, at 107.

order to optimise the program. This remarkable process is called "transfer of creativity".[95] Ultimately, the compiled language corresponds to instructions which form a file in binary modes, corresponding to certain discrete levels of electrical impulses to be executed by the machine. The program is then ready to be run by the machine. Inputs will then be required by the machine in order to run the program. Similarly all information given to the machine will be compiled and coded in sets of digits impossible to understand by human standard. The chain of command is applied by the central processing unit, which calls the "operations-machine" which passively waits for sequential signals to perform instructions held in micro codes.[96] Clearly, the program need not to be "original" in expression to be executed.

Therefore, the design of any computer program is defined by an algorithm. The latter is a mathematical object, numerical and non-numerical, which models the human brain in computational steps equivalents to sequences of mental steps. As a result, any attempt "to distinguish algorithms as one sort of thing and mental steps as another, will ultimately end up in a quagmire".[97] This is what happens in trying to apply copyright in separating ideas from expression. No distinction can be drawn between mental steps and algorithms, as well as between non-numerical and numerical. Humans think in sequential mental steps and reproduce such thinking in algorithms. Thus, if copyright is applied, the doctrine of fair use should be invoked since one cannot prevent people from producing thoughts or using ideas.[98] Here lies a

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[95] [Newell, 1986], at 1029.

[96] Chris Reed ed., *Computer Law*, 2nd ed. (London, 1993), at 11.

[97] [Newell, 1986], at 1025.

[98] This theory has come "before a tribunal prejudiced against it by the 2,300-year-old Aristotelian dichotomy" and by its direct application in the idea-expression dichotomy, see Daniel McNeil & Paul Freiberger, *Fuzzy Logic* (London, 1994), at 60; and see Amaury Cruz, *What's the Big Idea Behind the*

fundamental dilemma. The question is whether algorithms belong to the realm of natural laws, and thus no property right ought to emerge, or whether they are applications of these truths, and therefore may be appropriated in order to provide incentives for their creation. Natural laws, fundamental truth or mathematical concepts do not bear in themselves any practical application and accordingly cannot be protected by any intellectual property rights. In contrast, inventions or applications of these concepts may be protected. It has already been argued that no great intrinsic motivation exists for creating or inventing practical inventions. Natural curiosity and possible fame may be the origin of such acts, but investments are necessary and ought to be compensated. An algorithm at the centre of the basic theoretical structure of computer science fundamentally describes what to do to perform a task. Scientific knowledge in computer science is in the form of means-end relationship which "control electronic impulses in such a particular way as to carry out a prescribed task or operation" as an intermediary between machine and user.[99] Because no dissociation is possible between machine and program, the value of a program is purely functional as opposed, for instance, to maps and charts, which may be qualified as functional but above all inform readers in an original expressive manner.[100] An algorithm is just an abstract form of a program or abstract specifications of the necessary steps to convey the essentials of what the operations-machine has to do. They work on a given representation of routine matters to accomplish primitive steps which are common

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*Idea-Expression Dichotomy? - Modern Ramification of the Tree of Porphyry in Copyright Law*, 18 Florida State University Law Review 1990, at 221.

[99] John Hersey, *Dissent From CONTU's Software Recommendation*, in *Technology and Copyright*, Georges P. Bush & Robert H. Dreyfus eds., (Maryland, 1979), at 248.

[100] In associating the case of maps and charts to computer programs Arthur Miller argues "that functionality poses no per se bar on copyrightability.", see [Miller, 1993], at 986.

ways of accomplishing certain effects. As such, they cannot be protected, but the practical effect they initiate in terms of efficiency is of value and deserves protection. In other words, the efficiency of the algorithm in producing technical effects is the value which needs to be protected.

The specific character lies in the efficiency of carrying out orders, which has no inherent aesthetic value as a form of expression. Given an algorithm, it is possible to code it in several ways or programming languages. For any such representation there are only a finite number of relevant algorithms that are of any reasonable form of efficiency. Algorithms have the character of a mathematical truth. Allowing intellectual property rights to cover algorithms as such puts at risks computer science itself, as it permits a few to have not only a monopoly "but a stranglehold on a basic behaviour".[101] The problem seems to be more elaborate, since algorithms are embodied in programs whereby programs are codified versions in programming language. Nonetheless, a program is only a general specification for actions interpreted by an interpreter, which is modified by the latter to add some efficiency and missing links to the procedure. As result, a program does not implement in detailed steps the task to be accomplished; it only gives a general specification for action that is interpreted for a particular occasion by the interpreter.[102] It reads directly from the specification of the algorithm even though programs are designed in high-level representation as an embodiment of algorithms. Consequently, in the formation of computer programs creativity occurs only in the search for efficient means to produce technical effects. This search involves human creativity because only human

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[101] [Newell, 1986], at 1027.
[102] *ibid*, at 1029.

beings look for better ways to improve their weaknesses or go beyond their natural limitations. In other words, the value of computer programs is represented by the instrumentalist purpose of achieving tasks in a more efficient manner. As a matter of fact, developments in the field artificial intelligence may pose problem to intellectual property in recognising creativity when it leaves the scope of human nature.

As a result, programs are human readable expressions of fundamental principles which have the character of mathematical truth. This form is a continuum where there is no "hard and fast line between systems to design algorithms and systems to design programs."[103] Programs inherently express fundamental truth by means of algorithms which intend only to run a machine. Because intellectual property looks for differentiation in order to attribute rights, it becomes difficult to determine what ought to be protectible in a computer program. Arthur Miller contends that "programming entails a significant degree of individuality" since "no two programmers independently would design a program that enabled the computer to solve highly intricate problems with the same structural details".[104] His perception is blinded by the belief that individuality is expressed in terms of expression. On the contrary, differentiation in the field of computer science arises from the sense of a purpose or task to be accomplished and not "design". Accordingly, Allen Newell, as a computer scientist, perceives individuality in different terms. He concludes that:

> "The computer field maintains a distinction [...], but it is more the distinction between what specifications to write to do tasks of interest versus the details of particular schemes for writing the specifications."[105]

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103 *ibid*, at 1030.
104 [Miller, 1993], at 984.
105 [Newell, 1986], at 1030.

Moreover, advances in computing technology have shown that new programming systems provide only a set of constraints that are to be satisfied by the ultimate actions. The interpreter has to determine what actions are needed to satisfy the constraints and execute them. So much for human creativity in the computing field in terms of literary expression.[106] Programmers need only tell the machine what has to be achieved and the machine determines the necessary actions to perform the task. For instance, the form of many expert systems, such as PROLOG, is simply a collection of if-then rules that provides the knowledge needed to perform a task. Also in the near future "some areas of technology will end up with *all* of the inventive activity in terms of algorithms."[107] The important part is the logic and not the way it is expressed, as there is no clear distinction between data and procedure and the overall symbolic expression which determines the ultimate behaviour of the machine.[108] What gives meaning to knowledge, data and overall structure is the purpose of its task. Using the "behaviour" of a program does not "exhaust" the program itself. Thus, access to previously invented programs allows new inventions to occur. Motivations to create are partly that one benefits from the inventions themselves by using the enhanced system. If copyright protection is given, it may be either broad or narrow. Therefore the problem remains to define the proper scope of industrial property as distinct from copyright, in order to provide adequate incentives and let people learn from previous programs.[109]

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106 Advances in artificial intelligence in speech and related computer-generated works have already initiated a more fundamental debate on the fundamental concept of "human" authorship, see [Miller, 1993], at 1044-72.

107 [Newell, 1986], at 1030.

108 *ibid*, at 1033.

109 [Cornish, 1993], at 60.

As regards information technology, the case of computer programs shows that there is a need to enlarge the scope of intellectual property as information technology advances. Computer programs may certainly be categorised as works of function but certainly not as literary works. The former category regroups works that use information in symbolic form to describe and implement a process, procedure or algorithm.[110] Traditionally, works of function were to be written works, directly accessible by the public. For instance, recipes are manuals of instructions which describe a procedure to be implemented manually. In principle, functional aspects of recipes cannot be protected by copyright; however, the descriptive aspects of a recipe are protectable. Computer programs do not contain any descriptive elements but represent a task of technical effect. Accordingly any argument contending that "with computer programs the difficulty is protecting their descriptive aspect without protecting their functional aspect" is irrelevant in the electronic milieu.[111] Further, as technology advances, information is reduced to a digital form to become integrated in physical objects such as a computer chip or a diskette and then hidden from the human eye. A clear distinction between works of function, such as computer programs, and works of the mind, must be drawn according to their inherent value. Works of authorship are valued for their intrinsic aesthetic qualities of expressing knowledge and adding differentiation. They suffice in themselves to communicate concepts or ideas whereas works of function, such as programmes, need a computer to

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[110] *Dictionary of New Information Technology*, (New York, 1982)

[111] O.T.A., *Intellectual Property Rights in an Age of Electronics and Information* (Washington DC, 1986), at 78, Hereafter: [O.T.A., 1986]

be of any value.[112] It may be argued that a computer screen is the equivalent to the pages of a book. Similarly to the pages, a computer screen is a passive carrier although it allow users to interface with a machine for multiple purposes.[113]

### PROTECTING THE VALUE OF COMPUTER PROGRAMS

Reverse engineering poses directly the problem of the appropriate form of protection of computer programs, and especially the right of access to algorithms. The act of reverse engineering is a controversial subject among members of the computer industry, not only because it is an established practice within the industry, but also because it involves powerful national economic and political interests.[114] Most software of market significance is written or at least designed in the U.S.A. and a large part of the hardware that uses this software comes from American based companies.[115] Thus, it should be of no surprise that the public position of the U.S. Trade Representative during the debate on the European Directive on computer program criticised the Commission's position whereby "decompilation" should be allowed for the purpose of study or compatibility since it opens Pandora's box. At this

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[112] See the opposing view of Arthur Miller: "computer programs, like other literary works, are expressive. The imagination, originality, and creativity involved in writing a program is comparable to that involved in more time-honored literary works and far exceeds various efforts that have long enjoyed protection under the copyright rubric. Indeed, interface programmers have taken to calling themselves "interface designers," and describing their mission as attaining "aesthetic functionality.", [Miller, 1993], at 983-84.

[113] [O.T.A., 1986], at 78.

[114] G. Gervaise Davis III, *Scope of Protection of Computer-Based Works: Reverse Engineering, Clean Rooms and Decompilation*, in *Reverse Engineering: Legal and Business Strategies for Competitive Product Design in the 1990's*, (Michael A. Epstein and Ronald S. Laurie, 1992), at 44 Hereafter: [Davis III, 1992]

[115] In 1991, nearly 80% of the world packaged-software market is supplied by U.S. companies for a total market of $52bn. In 1993, out of 30 top software firms in Europe - European sales only - almost 20 of them are U.S. (source IDC; INPUT), see "American big byte", The Economist 12th November 1994, at 102.

point of discussion, it is of interest to notice that two different terms have been used, "reverse engineering" and "decompilation". The latter is simply an abuse of language.[116] The act of "decompilation" is purely a myth since it cannot be done technically. As Andy Johnson-Laird simply put it:

> "You cannot decompile a programme any more than you can make eggs from an omelette."[117]

Therefore, I will use the term "reverse engineering" which may be defined as:

> "the process by which one analyses a product or item in order to learn a process associated with that product or item such as its composition or the process by which it was made."[118]

A few considerations may already be given. This is an act which cannot involve copying for the purpose of direct sale, and imposes active reasoning and analysis in order to extract the logic of the program. In the U.S. as well as the European Union, it is a restricted act which in practice is not necessarily illegal. As a matter of fact, it is permissible for any party to purchase and analyse a program from its object code in order to determine its composition. For instance, CONTU analyses "reverse engineering" as an "essential step" which includes the copying of a work in the process of loading a program into the machine.[119] Nonetheless, national copyright legislations have provisions to curtail the process and have left courts to resolve

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[116] The term "decompilation" is widely used and Arthur Miller defines it it as "the process of analysing a machine-language computer program (a format comparatively few people can read and comprehend) and re-rendering it in human-readable form", see [Miller, 1993], at 1013; The term "decompilation" has been essentially used during the drafting of the European Council Directive and adopted as a synonym for reverse engineering because there is no word in the French language for the word disassembly, [O.T.A., 1986], at 84.

[117] [Johnson-Laird, 1992], at 104.

[118] Michael A. Epstein, *Fair Use of Copyright Law*, in *Reverse Engineering: Legal Business Strategies for Competitive Product Design in the 1990's*, (Michael A. Epstein & Ronald S. Laurie ed., 1992), at 12.

[119] The Commission recommended that section 117 as enacted in the 1976 Act be repealed and replaced accordingly, [CONTU, 1979], at 12.

conflicts of interests among software providers.[120] The European Directive provides that decompilation is not illegal if necessary to achieve interoperability between programs.[121]

The commercial value of programs has dominated the copyright debate to impose legal as well as economic consequences. As Gervaise Davis argued:

> "The public position of the U.S. Trade Representative [...] during the EEC Software Directive debate [...] that reverse engineering is illegal under U.S. law is not only wrong on legal grounds, but can also be dangerous to the economic health of the U.S. computer industry in future years."[122]

Moreover, this position, encouraged and supported by international companies like IBM and Apple for commercial reasons, is simply insupportable on technical grounds. Arguments proliferate as to whether or not reverse engineering should be allowed. On the one hand, it is a process which in essence ought to promote innovation by allowing analysts, or "reverse engineers", to learn from existing works in order to create new works, eliminating redundancies in R&D. It also allows abstract knowledge and specifications to be disseminated while promoting competition. On the other hand, the analyst is accused of copying the program from its original storage medium by reverse engineering it into source code form in order to read and learn from the work. The term "copying" misleads, since it characterises the act of reverse engineering as a form of wrongdoing. Not only is "copying" a restricted

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[120] Difficulties arise in differenciating performance of the same functions and similarity in expression. Most often they have been looking at the "paper trail" left by reverse engineers in the research and development process to rule whether or not the initial step of copying has produced an infringing final work, see [Davis, 1992], at 45.

[121] However, the Directive expressly prohibits decompilation if the act of reverse engineering intends "to be used for the development, production or marketing of a programme substantially similar in its expression [to the reverse engineered work] or for any other act which infringes copyright.", Art.6, Council Directive of 14 May 1991 on the Legal Protection of Computer Programs (91/250/EEC), Official Journal 1991, L122/42.

[122] [Davis, 1992], at 45.

act which does not accurately describe what reverse engineering involves, but also the act involved does not interfere with the market value of the "copied" program. Moreover, opponents of reverse engineering, mainly lawyers or representatives of large software companies, claim that to avoid making an infringing copy of the program, reverse engineers should look at the binary data as it is stored in the computer's memory.[123] Because loading into memory does not constitute a permanent fixation of the program and as such an infringement of copyright, their argument would seem convincing legally. Nonetheless, it is simply impossible in practice to learn from the binary forms. Thus, two opposite interpretations of copying may be given.[124] A broader interpretation may be accepted but would conflict with the copyright owner's exclusive right to prepare derivative works. A narrow one could be found under the doctrine of fair use because it permits copying for scholarship or research. Nevertheless, such an argument cannot stand, as copying is made in a context of a commercial nature; also the whole work needs to be downloaded.[125] Further, opponents of reverse engineering claim that simple observation of the behaviour of a computer, combined with the documentation provided, suffices to get all the information needed. In fact, the documentation provided is sparse and inaccurate in technical terms since computer programs exist only in form of object code.[126]

Technically the act of reverse engineering may employ three strategies, more or less efficient in their approach according to the aim targeted. These are described

123 [Johnson-Laird, 1992], at 129.
124 [CONTU, 1979], at 13 & 22.
125 [O.T.A., 1986], at 84.
126 [Johnson-Laird, 1992], at 129.

as the "bird-watcher approach", the "book-worm strategy", and finally the "anatomist strategy".[127] The first one refers to the observation of the results obtained, how the program runs, and understanding what happens inside the machine by interfering with the results. Programmers need plenty of analytical and guessing skills to understand the "what", "why", and "where" which give the computer results observed. The second approach is based upon reading all the written information on the program in order to determine how it ought to work. Both approaches are extremely limited because the documentation provided with the software is incomplete, inaccurate or out of date. Also, simple observation of what happens on the screen does not provide the internal fundamental functions explaining how results are achieved. Moreover, the documentation advertises what the program should be and does not explain what it is exactly. Finally, the "anatomist strategy" characterises what really is reverse engineering. This approach runs the program in an experimental environment so that the analyst can observe from the inside what are exactly the tasks accomplished by the machine. Only this method allows the analyst to attempt to figure out what the millions of instructions mean in terms of a higher level of abstraction.

This analytical process starts by loading the object code into the computer's memory. At first, the object code is observed with the help of a program which visualises step by step on a screen what tasks are ordered to the central processing unit and other memory locations. This representation is in binary system or a combination system formed only of "0"s and "1"s. The combination starts numbering from "0" and is stored in memory locations which are very limited in amount of

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[127] [Johnson-Laird, 1992], at 104; [Davis, 1992], at 56.

information. This means that each memory location can only ever store one value at any one moment in time. These binary digits are traditionally abbreviated to "bits" and are stored in groups known as "bytes". Each is assigned an "address" in order to be identified in the memory. Thus, the whole program is transferred in object code and stored in the computer with thousands of unrelenting "0"s and "1"s produced by the compiler and combined with the necessary modules from object code libraries. One can see the awkwardness of such a form. Virtually no information can be directly extracted from that form of "expression". Therefore programmers do not attempt to analyse such a form. The next step is to separate instructions from data. Since the contents of any memory can be either of instructions or data and "expressed" in "0"s and "1"s, the compiler, or assembler, has to tell the analyst where it expects the computer to start ordering tasks. The analyst has to observe the central processing unit executing from the first instruction of the program to the last, in order to determine which particular address contains instructions. It should be noticeable that reasoning skills are required to "disassemble" object code in order to convert it in to something more meaningful which can tell the analyst what instructions the central processing unit is ordered to do.

The term "disassembly" is used because the process takes a small step backwards towards assembly language.[128] What an analyst-programmer does is to define from object code the individual instructions that were generated by the compiler. No comments and no symbolic variable names are present to guide the programmer. It should be remembered that all he has is the raw low-level instructions

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[128] [Johnson-Laird, 1992], at 118.

that are executed by the central processing unit. In order to make his life a little easier, computers have a disassembler program just as they have compilers or assemblers. Conversion of all information in the object code contained in the assembler is time consuming and repetitive. The use of instinct is necessary as much as logic, adjusting where the disassembler starts and stops disassembling instructions, and where it skips over code. No information is added since provided information comes from binary patterns memorised in compiled form. This is an absolute one-to-one relationship between the instructions that the disassembler outputs and the binary patterns stored in memory. The latter will be used in order to recreate the original source code. Again, skills are necessary to define what the code does and what is the processing sequence. Right from the beginning, the analyst needs to decode from disassembly form the source code which is intermixed with code and data. Consequently, the analyst will need to add his own comments to the disassembled listing in order to guess what the program might be doing. Only the combination of gained knowledge of the process and reasoning skills gives meaning to the code. Thus the analyst needs to add his own ideas to the process since he has to guess in a reasoned manner what the computer program does internally. The final task will be able to create in high level of abstraction a flow-chart of the functions of the program in order to explain its overall structure or algorithm. It is then possible from the flow-chart to write in higher language a program following the general idea of the shape of the analysed program.

From all this, the first question which needs to be answered is whether the source code established by the analyst is a "copy" or an "original" in its own right? The only way to find out is to compare the first source code with the second one. In

practice such comparison is simply denied to those who reverse-engineer programs, and only courts may have access to sources for the purpose of determining infringing acts.[129] Therefore, analysts cannot determine whether they have infringed copyright unless the source code has been stolen from a competitor. As regards the initial program all comments and general formats are lost at the very moment when the compiler translates the source code in to object code. Therefore, a program which has been fashioned from a reverse engineered object code cannot be identical in design to the source code of that reverse engineered object code. This difference is strengthened by the fact that analysts actively participate in the translation of the object code, notwithstanding that errors from the initial program have been corrected, missing links added and the overall structure re-organised in order to make the program more efficient. Nonetheless, the final product may have identical instructions, since there are standard functions to produce certain results. Thus, any similarities resulting from the exercise, represent only fundamental functions which can be found in any programs, and of course in the reversed engineered program. Consequently, the resulting program is a direct product of the constraints under which the initial program was developed, and both programs are equally efficient in function in their own right.[130] The next question which arises is whether the resulting program should be considered a derivative work. Derivative works are those in which someone else's creation is recast, transformed or adapted. Ultimately, any program that functions in a similar way to another may be held to be a derivative work so long as similarities between functions are not due to literal copying of all the program. A reasonable

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[129] *ibid*, at 126.
[130] *ibid*, at 131.

interpretation of a derivative work would contend that parts of the first program are included in the second one. Nonetheless, the problem is that many parts are identical because they are standard functions which are commonly used by programmers.[131] Therefore, these cannot be taken into account since they are not protectable by copyright.[132] Because reverse engineering involves reasoning skills, personal judgement, and expertise, because the documentation provided is inaccurate, and because the program reconstituting from an initial object code stripped of any original comments, the reconstructed program cannot be considered a derivative work.

Therefore, claims advocating that, with the ability to observe a program and to read its documentation, there is no need to reverse engineer, do not hold. Only the object code can answer every question about the program. Only from the object code is it possible to recapture the value of programs, in other words their efficiency, or their manner of producing a technical effect. The object code does what it does regardless of what the documentation says. Moreover, no documentation will reveal inadvertent errors which are corrected by the compiler. Thus, what is seen from external observation is only a fraction of what the program actually does. The inner secrets of a program are embodied in the higher levels of abstraction material such as the source code commentary and specifications. This material never survives the process of being converted into object code. Also, it is clear that almost all information on the program comes from the mind of the analyst. The process of

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[131] *Apple Computer, Inc. v. Microsoft, Inc. et al.*, 24 U.S.P.Q.2d 1081 (N.D. Cal 1992).

[132] In 1987 it was reaffirmed that "courts should deny protection to everything that is necessary to the purpose or function of a computer program", see *Whelan Associates, Inc. v. Jaslow Dental Laboratory, Inc.*, 797 F.2d 1222 (3rd Cir. 1986), *cert. denied*, 479 U.S. (1987), at 1236; In 1991 the U.S. Supreme Court held that industrious labour itself was not enough and that some "spark of creativity" is needed and even constitutionally required, *Feist Publications, Inc. v. Rural Telephone Service Co.*, 111 S.Ct. 1282 (1991).

reverse engineering is almost entirely an additive process. It is impossible to reverse engineer a program by looking at object code on the screen or at the binary presentation, since there are in practice thousands of binary combinations which contain instructions as well as data. "Reverse guesswork" is the reality of reverse engineering with a lot of creativity.[133]

The application of copyright principles to computer programs has corrupted and eroded the essential purpose of intellectual property regimes. Because distortion of language and certain euphemisms have been required in order to apply copyright to programs, the true value of programs has been lost to sight. For instance the use of the terms "derivative work" and "copy" is distorted. A derivative work refers to printed translations, dramatisation, anthologies which deserve copyright protection separate from the original work. Also, a copy refers to one form or another of reproduction of an original work, for the purpose of dissemination to, and perception by human beings. This involves perception by human senses or reasoning of images, sounds, or logic of the original work. Therefore, making copies of original works is restricted in order to protect the knowledge value of the work, but making a derivative work out of previous works is not restricted since the value of original work is built from previous work. Copyright seeks to protect the sphere of cultural and scientific resources. By contrast the value of computer programs rests on a different basis. The algorithm is the valuable part of a program and protecting access to it is of no interest because it does not threaten its functionality. Access to its abstract principles ought to be open to others for progress of its efficiency.

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[133] [Johnson-Laird, 1992], at 131.

In restraining reverse engineering, commercial entities, I venture to say, have the definite purpose of legalising monopoly powers over industrial processes.[134] The industry has a legitimate claim which is to protect their investment, but the use of copyright is illegitimate since it endangers future applications of the law. As regards works of the mind in electronic milieu, it teaches us to ensure that access to ideas and principles is free of any encumbrance exogenous to intellectual property. For instance, there are many reasons to reverse engineer programs which respect intellectual property doctrines.[135] Some are non-commercial applications such as teaching, and writing for educational purposes. In the commercial field, intellectual property is not meant to prevent competition among producers of programs for the greater benefit of society. Reverse engineering fixes errors when an existing program does not work properly. It stimulates people because there is a major public benefit to encourage inventors and businesses to devise competitive replacements, or substitute products. It serves to encourage the original inventor to keep improving his products and advance technology.[136] It permits interoperability in order to add and customise existing programs to other ones.[137]

The application of copyright as a form of protection for computer programs has brought some confusion over the purpose of intellectual property. In an

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[134] "granting copyright protection to things like operating system software [...] is in effect granting a long-term patent like monopoly in the machine itself", see [Strong, 1993], at 27.

[135] [Davis, 1992], at 50.

[136] Some examples of learning from the results of others in software industry include: the MacIntosh interface based on ideas tried previously by Xerox and SRI and before by the Stanford Artificial Intelligence Laboratories; the Lotus 1-2-3 interface based on the interface of VIsicalc an other spreadsheet; DBase was based on a programme previously developed at the Jet Propulsion Laboratory, exemples cited in Bradford P. Lyerla, *Copyrightability of Software User interfaces: The Natural Law Versus the Social Utilitarian Approach*, 10 The Computer Lawyer 1993, at 21.

[137] Art.5*bis*, Council Directive of 14 May 1991on the Legal Protection of Computer Programs (91/250/EEC), Official Journal 1991, L122/42.

information technology society, and especially with the development of a global information infrastructure, proper understanding of intellectual property principles, and especially copyright, should prevail. There is an urgent need to reconsider the perceptions that legislature and courts hold on the subject. A balance must be ensured between incentives in terms of limited monopolies, access to knowledge, and freedom of expression. Each intellectual property regime has a define purpose and should apply as intended, and the creation of *sui generis* regimes should be sought in order to respond adequately to society's needs.

# *Chapter VI*

## ARE COPYRIGHT AND *DROIT d'AUTEUR* VIABLE IN THE LIGHT *of* INFORMATION TECHNOLOGY?

> *"Copyright is the Cinderella of the law. Her rich older sisters, Franchises and Patents, long crowded her into the chimney-corner. Suddenly the Fairy Godmother, Invention, endowed her with mechanical and electrical devices as magical as the pumpkin coach and the mice footmen. Now she swirls through the mad mazes of a glamorous ball"*
>
> - Zechariah Chafee, Jr.*

Technological change is driven by a constantly fluctuating debate about the extent to which intellectual property regimes ought to serve the over-riding needs of society. As such, information technology affects society to become a dominant and justified concern. What are the stakes? Given the rising importance of information in society, there are economic, political and social implications. In effect, information technology, and especially the information infrastructure, fosters dissemination of information and brings unprecedented opportunities for discourse.

Given the pivotal role that information plays in the information age, new competing claims will rise along with new opportunities. Intellectual property, and especially copyright institutions, have served the purpose of balancing competing claims as an mediator between users and providers of information. With the rise of information technology, this balance is lost. Therefore, it is essential to realise that in analysing the effects of information technology on copyright protection, one is making judgements about the very nature of the society we live in, and especially the

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* Zechariah Chafee, Jr., *Reflections on the Law of Copyright*, 45 Columbia Law Review 1945, at 503.

purpose of copyright in that society. Consequently, this final chapter will address the question whether the goals towards which copyright institutions are directed mirror the goals of society in an information age. Moreover, these goals take shape in a defined mechanism which produces certain incentives and rewards integrated within a system of operating rules in order to reach the goals. Consequently, as the goals change other parts of the system are likely to change in response. Above all, intellectual property is the product of certain social interactions which determine the position of each player taking part in the system. As such the concept of authorship plays a consequential role in the determination of the goals, since it is a reflection of the very nature of the society.

In order to to examine the viability of copyright law and *droit d'auteur* in an information age, attention will given to the impact of information technology on society and the creative environment in order to determine the implications for the current copyright institutions. Finally, a new approach to the concept of authoship will be given in electronic milieu.

## IMPACT OF INFORMATION TECHNOLOGY ON SOCIETY

The rise of information technology brings unprecedented opportunities in the realm of creativity. For instance, the Internet represents a high capacity digital multi-media carrier where broadcast, messaging and database communication models converge.[1] With a few million people on the Internet, the infrastucture has reached a critical mass that governments, businesses, and society as a whole cannot afford to ignore. It is a

[1] *Financial Times Review: Information Technology*, Financial Times Wednesday, March 1*st*, 1995,

unique means to produce and process information with unprecedented ease. Gone is the industrial revolution society and rising is the information age society where people and technology merge. The product of this association is an environment full of people and ideas called *cyberspace*.[2] In this electronic environment, freedom of association is total. Also communities of the like minded are formed entirely by consent to express themselves with the help of human processes. As a result, I would certainly agree with Peter Huber that traditional limits on freedom of speech cannot be justified by traditional constitutional provisions.[3] Encompassing all societal activities, cyberspace must be analysed in a broad sense incorporating all transactions between information providers and users, notwithstanding that people may be creators, publishers, distributors, as well as users, all at the same time. Furthermore, this environment postulates interactivity among participants. As a result, "[a]s our personal understanding and relationships expand to include our human, environmental, global universal relationships, our understanding and appreciation of the possibilities that information [technology] offers will also increase and expand."[4] In sum, information technology must be considered as a critical factor which

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[2] "We are mutating into another species-from Aquaria to the Terrarium, and now we're moving into Cyberia. We are creatures crawling to the center of the cybernatic world. But cybernetics are the stuff of which the world is made. Matter is simply frozen information. ... The critics of the information age see everything in the negative, as if the quantity of information can lead to a loss of meaning. They said the dame thing about Gutenberg. ... Never before has the individual been so empowered. But in the information age you do have to get the signals out. Popularization means making it available to the people.", see Timothy Leary, *Chaos & Cyber Culture*, (California: Ronin Publishing, Inc, 1994), at vii.

[3] " "Deviance" loses its meaning when communities of the like-minded are formed entirely by consent. Freedom of association is so complete in cyberspace that traditional limits on freedom of speech become almost impossible to justify constitutionally. ... In this environment, no centralized government authority is going to stop wither purveyors of electronic pigs or consumers. Yet most people, most of the time, will keep expressive pigs out of their own, private spaces, if they can, often with the help of intermediaries. ... Public censorship is dead, but private censors are just beginning to market their services electronically.", see Peter Huber, *Electronic smut*, Forbes July 31, 1995, at 110.

[4] Robert K. Heldman et al., *Future Telecommunications Information Applications, Services and Infrastructure*, (McGraw-Hill Inc, 1992), at 13.

influences society while society itself effects its development through its established political and legal institutions, and practices. To that effect, as the use of information technology expands, society is faced with new challenges, especially in relation to the field of intellectual property.

A clear understanding of the power of information technology is necessary in order to grasp its far-reaching implications for society, and therefore intellectual property. It has already been noted that intellectual property has been established and developed in the public interest.[5] Also, technology is a critical factor in the subject matter. For instance, there is no need to emphasise the differences between the press and mechanical print, on the one hand, and the Internet, on the other; however, it has to be clear that electronic milieu is not the intrinsic issue in investigating the suitability of copyright law and *droit d'auteur*. More importantly, it is the inherent idea supporting the technology which it is crucial to determine in relation to intellectual property. With the press, the original idea is to disseminate tangible means of expression. By contrast, the purpose of information technology is to eradicate the tangible aspect in order to concentrate on the dissemination of information and to "allow mankind to transform data into information, which means that the data get a certain meaning, answer certain questions."[6] Consequently, progress is not based any more on making better use of physical matter, and other physical natural resources, but on the disseminaton of unlimited information without any significant cost. Thus,

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[5] For a complete review of the relation through history between British, American, French and German copyright law and the notion of public interest see, Gillian Davies, *Copyright and the Public Interest*, (Munich, 1994), at 19, 49, & 73.

[6] G.P.V. Vandenberg (ed.), *Advanced Topics of Law and Information Technology*, (The Netherlands, 1989), at 1.

the collection and processing of data into information, and access to that information, become fundamental aspects in analysing the emergence of intellectual property rights because information dominates each sphere of human activity by playing a dynamic role.[7] Black observes with much truth:

> "Few phenomena are more remarkable yet few have been less remarked than the degree in which material civilization, the progress of mankind in all those contrivances which oil the wheels and promote the comforts of daily life, have been concentrated in the last century [...] It is the three momentous matters of light, locomotion, and communication that the progress effected in this generation contrasts surprisingly with the aggregate of the progress effected in all the generations put together since the earliest dawn of authentic history."[8]

As a matter of fact, it should be stressed that the level of exchange of ideas has been the prime factor in determining the rate of progress in terms of cultural and scientific creations.

Such progress shows at the same time a certain decline of the nation state to be replaced by more individualistic entities. Accordingly, new ways of creating wealth arise. New communities with different values are being created around the new technology. In other words, these wired communities compose the information age society. The industrial revolution has permitted mass-production with the creation of linear product lines and producing linear declination of products. Moreover, this societal approach has involved mass education, mass-media, mass-entertainment, and even mass-destruction weaponry. By contrast, the information age society is gearing toward a totally different societal organisation where the concept of besopke against generic goods will prevail : the design of customised products with highly specialised

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[7] "si l'informatique provoque à long terme une mutation décisive dans la langue et dans le savoir, elle entraînera des changements de la pensée, des concepts et du raisnonnement, qui effaceront peu à peu les outils utilisés pour les deviner. Que faire? Sinon poser des questions sans réponse et donner des réponses sans autre ambition que de soulever de nouvelles questions.", Simon Nora & Alain Minc, *L'informatisation de la société* (Paris, 1978), at 116.

[8] T. Black, *Intellectual Property in Industry*, (London, 1989), at 177.

units of production. For instance, CDs may be bought as a generic good with pre-selected tracks ; information technology may allow consumers to chose the tracks and produced their own CDs. Similarly, information technology produces many different channels of communication where digitisation allows simultaneity, where people may use at the same time different materials, and real time information, where people may get information directly as they happen. Concepts such as time, space and distance become irrelevant. In other words, up-to-date and real-time information may be provided regardless of the physical and time position of the user. All this implies a decentralisation in the production towards individuals. More importantly, more information will be needed in order to solve more complex problems, resulting in an implosion of information needs. Therefore, many conflicts over the use of information will arise and will need to be resolved in order to preserve social stability in the realms of politics, economics, and culture.

It may be claimed that conflicts over the use of information will impede the emergence of intellectual property rights. For instance, decision-making in management such as determining adequate levels of production will depend on the availability of information. However, works which place greater emphasis on differentiation and analysis, and forge opinions, will most certainly be just as important for success as factual information. Moreover, in many other social activities, society will gain from scholarly, scientific or artistic works. In electronic milieu, tangible differentiation between raw data and intellectual creations is blurred. In other words, information has been freed from its tangible yoke. Consequently, I venture to say that conflicts which act as impediments to adequate emergence of

intellectual property rights arise in essence out of confusion in distinguishing works of authorship from works with low or no authorship value at all. Thus, adequate determination of authorship would permit appropriate emergence of property rights. For instance, if the military or business companies want to secure property rights on confidential information, the appropriate rights ought to restrict access to that information. By contrast, works of authorship are delivered to the public at large and ought to be free of access. Property rights are intended to protect works of the mind and to reward creators of such contributions adequately. Above all, what needs to be noted is that proper recognition of the value of each type of information available on the information infrastructure will resolve conflicts of interests. For our purpose, works of authorship ought to be recognisable for their inherent quality which puts value on differentiation by means of the intellect as well as their free access to the public. Moreover, it has also been noted that proper recognition should avoid one pitfall: a correct determination of the value of information in digital form should prevent commercial interests from dictating the intellectual property regime which ought to be afforded.

In a digital environment, progress may be assessed by the quality of exchanges of information, in terms of value placed on differentiation. An outcome of this differentiation will be the production and availability of creative works on the Internet. Accordingly, the term "information age society" contrary to the common understanding, ought to place greater value on information by means in terms of

knowledge.[9] In that sense, the traditional concept of knowledge has moved from cause to configuration due to the information technology environment. In other words, this shift implies innovation and creativity leading to political, economic and cultural empowerment. Information technology provides new tools, new methods, and new distributive systems to further that creativity. As a result, new opportunities have arisen with different approaches as to the foundation of creativity. This phenomenon encourages competition over the use of information resources and explains the sudden proprietary attention given to works of the mind in the electronic milieu. From the earliest days, human-kind has always searched for knowledge and the means to control it. As a social construct, intellectual property has been established and tailored to achieve the purposes society has for it. It is not some predestined static law of human-kind which ought to evolve according to individual claims as a dynamic legal system within the new digital environment.[10] In other words, information needs to be free from any state or social constraint which may encroach its transmission. This transfer of power may be noted as the empowerment of people and may be observed in many aspects of human activities, such as the realm of economics, polititcs, and culture.

Rational economic decisions are made on the basis of cost and benefit analysis in order to use scarce resources most efficiently. Such analysis depends on the information available to decision-makers, who are always in search for the most

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[9] I would refer the reader to chapter 4 and especially to Peter Drucker who argued that knowledge is the only meaningful economic resource, Peter F. Drucker, *The Landmark of Tomorrow*, (London, 1959), at 18.

[10] "If other cost-effective means exist means exist for assuring the availability of adequate supplies of information to the public, copyright might not be needed. It may be, for example, that contracts will prove to be more flexible and satisfactory alternative.", Pamela Samuelson, *Copyright and Digital Libraries*, 38 Communications of the Association for Computing Machinery 1995, at 17.

updated and accurate information. It can be said that factual information has been crucial in decision-making processes. As such, there is an implosion of information as well as complex systems in need of information. In that respect, during the industrial revolution, technology was mainly applied to substitute more efficient processes for less efficient ones in order to compensate for the scarcity of resources along with imperfect means of information. By contrast, the information revolution has changed the whole economic environment because information technology provides numerous ways of accessing and appropriating information, where information becomes a primary resource for efficient gains and supplants technical substitutes. For instance, the changing economic role of information can be seen in examining the use of information in the industry and service sectors. Further, the rationalisation of decision-making processes is made possible by the increased use of computer technology and its applications in information systems and technical processes. Allen Newell, a former researcher at the Rand Corporation, foresees future industrial applications which depend upon information resources. Taking the case of casting iron, plastics, or powder metal, he explains:

> "Suppose, now, we get the construction of forms for the medium under suitable computer control. That is, from a data structure in the computer, an automatic, essentially robotic, device constructs the form or mold from which routine art produces the physical objects. This is a special version of our operated-machine. This is only done currently in crude ways and in part, but it is an active area of research."[11]

Moreover, economic decisions will not only be made by human beings but also by intelligent machines which automatically respond to information systems and external queries with the appropriate action. Consequently, an information-age society is

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[11] Allen Newell, *The Models are Broken, The Models are Broken!*, 47 University of Pittsburgh Law Review 1986, at 1030, Hereafter: [Newell, 1986]

dependent upon information of all provenances for potential economic gains. Economic decision-makers, private or public, are willing to appropriate any kind of information to gain comparative advantages. As a result, the largest economic opportunities will be in organising and co-ordinating productive activity through the process of information handling. The number of information providers will not only increase in the form of tailor-made services, but also respond to the phenomena of empowerment by means of interactive services.[12]

New opportunities also arise in the realm of politics. These will foster a sense of national interest on political issues leading to direct participation in the political decision-making process. Accordingly, informed citizens will ensure that institutions remain within the democratic mandate attributed to them. For instance, the Clinton administration has initiated a progam for civic networking using information infrastructure to provide civic and community services.[13] This program has already allowed every U.S. citizen who owns the proper computing facilities to access freely any information pertaining to the work of the Federal administration as well as Congress. Citizens may analyse, comment and make their own informed opinions on political issues as well as contact their own representive at Congress. They may act individually or in concert with others to voice their concerns, strengthening a sense of common interest on issues which are generally overlooked. As a consequence, direct and active involvement of citizens in politics redefines the nature of political practices. The empowerment of people in state and federal levels increases where the

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[12] Richard Tomkins, *Enter the Bespoke Newspaper*, Financial Times Monday, March 13, 1995 at 13.

[13] Center for Civic Networking, *A National Strategy for Civic Networking: A Vision of Change*, (Washington D.C., October 6, 1993).

focus of attention may be given to the politics of information, and not to sensationalism. Here lies an important issue. Who owns the information produced by public institutions? For instance, in the United States information provided by the Federal State and its agencies does not attract copyright protection.[14] By contrast, in the U.K. Crown copyright exists.[15] Publications emanating from the French State would be at least protected not only by economic rights but also moral rights.[16] Such an issue needs to be addressed in correlation with the determination of what composes the public domain.

As a result, opportunities in the political arena will influence practices in the use of public domain materials. On the one hand, citizens want to be able to supervise more closely the work of their representatives and political institutions. On the other hand, elected representatives need to receive direct feed-back from their constituency as well as to involve their electors in participating directly in democratic debates. Clearly access to as well as protection of that information is crucial. The right to obtain and distribute information determines people's adherence to democracies and respect for their institutions.[17] Technically, information technology facilitates access as well as manipulation of information. Problems arise in determining what level of copyright protection should be afforded to works of authorship in the political arena just as much as in the public domain. Both neutral as well as politicised information is

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[14] US voir perrit

[15] "The Crown has a special copyright in works made by an officer or servant of the Crown in the course of his duties, and Ats and Measures.", see W.R. Cornish, *Intellectual Property* (London, 1989), at 285.

[16] Affair of the Dictionary of the *Académie Française*, the court hupheld the *Commissaire du gouvernement* that the plaintiffs were the lawful grantees of the State and the State was copyright owner of the Dictionary, Judgement of 28 flo. an 12, Cass.Civ. [1791] 1 Dev. & Car. 1.971, 3 Journal du Palais, at 747, *conf'd* Trib. d'appel [1808] 2 Dev. & Car. 1.103, 4 Journal du Palais, at 505.

[17] Daniel Bell, *The Cultural Contradictions of Capitalism*, (New York, 1976), at 1.

needed in order to ensure a democratic debate. Thus, partisan ideas need to be freely accessible to the extent that they do not contravene healthy democratic debate, which ought to ensure that all citizens can engage on orderly arguement. Such discourse ought to develop a sense of community to share values, which legitimises democratic authorities. Consequently, society not only needs free access to public materials relevant to public debate but also needs to rely on accurate information. In other words, a monitoring legal system ought to ensure that citizens may make informed, reasoned, and sensible decisions.

All aspects of social, scientific and cultural life will be permeated by information technology. Works of art express peoples' unconscious and their search to understand their own nature and the world they live in.[18] By increasing the amount of cultural and scientific works, more creative opportunities are open to individuals. New art forms and ideas do not replace old ones but instead become part of an ever expanding resource on which individuals can build, re-create, and re-interpret their own aesthetic experiences. Culture needs to be governed by the principle of communal sharing and exchange of information where external forces shape peoples' creativity. Information technology reduces constraints and gives people the opportunity to have a greater control and choice over what they want to create and enjoy. For instance, they are able to receive information specifically tailored to their needs at the most convenient time and manner. As a result, greater emphasis is given to the interactive aspect of getting information as freely as possible. Conceivably everyone can be a creator and a publisher. Determination of authorship may be

[18] *ibid*, at 12.

difficult to ascertain since many people may contribute in different ways to one single work. In academia, it has already been recognised that:

> "Each day about 20,000 e-mail messages carry to more than 60 countries the abstracts of new academic papers, which readers can develop by gaining access to the full papers. And every day, about 45,000 physicists worldwide access [Hewlett-Packard's] electronic archive to find or to contribute new items."[19]

Appropriate protection ought to take into account these new needs as well as ensuring that the integrity of such contributions is assured. The question remains whether all types of contribution can be freely available. It has already been noted that access to works of the mind may be determined by the mode of production. In a marketing mode, access would be subject to a fee. By contrast, public production of works of the mind, especially in academia, may be subsidised by public institutions to allow sustained production of and free access to contributions.

Each person will be able to actively contribute to the creation of works of the intellect since more interactive tools and resources will be at the disposal of the public at large. Libraries, educational institutions and museums are already able to provide information and cultural works to those who would otherwise not have access to them. For instance private and restricted collections of works of art can be made available to the public at large and not only for the eyes of their owners or art experts. Universities have also opened themselves to the outside world to widen the scope of their research and teaching facilities.[20] As a result, information technologies allow better self-fulfilment and self-realisation to people in providing greater independence from

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[19] Martin Mulligan, *Speeding up the appliance of science*, Financial Times Monday, March 13, 1995, at A-13.

[20] The Houston Community College System has a program called "College Without Walls" which allows students to take classes by computer, Edward A. Cavazos & Gavino Morin, *Cyberspace and the Law: Your Rights and Duties in the On-line World*, (The MIT Press, 1994), at 9.

traditional information providers. The dynamic exchange of information also liberates people from traditional means of communication to challenge traditional forms of intellectual protection. However, interaction means greater potential for conflicts over the use of information in the realms of economics, politics and culture. Undoubtedly information technology frees information from society's control by empowering people; however, it should be noted that that control has been transferred into the hands of individuals. Clearly it is not exactly the same as saying "information wants to be free" since works of the mind originate from human creativity.[21]

## IMPACT OF INFORMATION TECHNOLOGY ON THE CREATIVE ENVIRONMENT

The development of information technology has changed the creative environment in a number of ways, many of which have significant implications for copyright. Among many concerns, questions arise as to who creators are, what motivates them, what kind of tools and materials they use, how they gain access to these tools, which skills and knowledge they need to pursue their work, what is their role in society. The creative environment is a complex social process composed of many elements where technology influences all social activities, and therefore the creative environment.[22] Creativity embraces many areas like the arts, sciences, and scholarship, where the influence of information technology is likely to take several forms. Primarily new types of intellectual tools will be used in these areas, not only for the creation of

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[21] Jim McClellan, *Can Information be Free?*, "Life" Section, The Observer Magazine 29 Jan. 95, at 75

[22] Elizabeth L. Eisenstein, *The Printing Press as an Agent of Change: Communications and Cultural Transformations in Early Modern Europe*, Vol.1, (Cambridge University Press, 1979), at 31.

works but also for their performance. Moreover, since creativity builds on works previously created by others, information technology will expand access to existing intellectual resources to develop new material in digital form. Clearly, all these factors will have a pronounced effect on those who participate in the creative process, especially in the manner they perceive copyright institutions.

Information technology provides many new tools which may be described as primarily intellectual. Because tools are designed to be at the service of human creativity, the intellect finds endless possibilities for self-expression. Moreover, information technology is an outcome of computational steps equivalent to sequences of mental steps.[23] In other words, it models the human brain which in turn duplicates its creative abilities by form of transfer of creativity. As a result, more opportunities are offered in science and scholarship, and also in the creation of works of art.[24] For instance, creators and researchers may access a much broader range of works. As Ithiel de Sola Pool remarked:

> "The technologies used for self-expression, human intercourse, and recording of knowledge are in unprecedented flux. A panoply of electronic devices far beyond anything that the printing press could offer. Machines that think, that bring great libraries into anybody's study, that allow discourse among persons a half-world apart, are expanders of human culture."[25]

Not only may people carry out their work but they may also expand and interrelate with other fields of interests. Obviously, the chief feature of the technology is to allow interaction on an unprecedented scale whatever the form of expression might be text, music, or graphic. Also, production of works of the mind reduces itself to an easy, fast

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[23] [Newell, 1986], at 1025

[24] Martin Mulligan, *Speeding up the appliance of science*, Financial Times Monday March 13, 1995, at 13.

[25] Ithiel de Sola Pool, *Technologies of Freedom*, (England, 1986), at 226.

and cheap process giving creators more room to concentrate on their creativity. As such, the power of creation resides in the technology as a subordinate and complementary means to the intellect.

Beyond the form of expression itself, the substance of the creative process changes. For instance, word processors have changed the manner in which writers may produce, edit and publish novels. Editions of final drafts may be postponed until the last minute giving authors greater control over the final products. Moreover, in expanding the boundaries of creativity the very nature of science, scholarship and the arts is transformed. For instance, advances in computer animation have enlarged the themes exploitable by the movie industry. Clearly, movies such as *Star Wars* and *Terminator* would have never been filmed or given viewers such a sense of profound reality to the plot without any of their special effects. In science, researchers may simulate experimentation or make fast calculations in the symbolic world before testing their discoveries in the real world.[26] Most of all, information technology empowers people to adapt and create their own tools in order to respond to their own needs and personality. Consequently, greater emphasis is given to self-expression which in turn heightens expression of personality. In other words, expansion of human culture is made possible because information technology renders information more accurate, timely and accessible, to make it more valuable for each individual.

In particular the information infrastructure, and especially the Internet, has facilitated resource-sharing between individuals, private and public organisations, educational institutions and government agencies. Beyond national boundaries, the

[26] [Newell, 1986], at 1031.

system generally referred as the "network of networks", covers North America, Europe and Asia to bring people and information resources closer.[27] This truly cross-national communication system facilitates instant communication between users situated a world apart. Especially popular among scientists, the Internet has become probably the most important communication instrument of the late twentieth century. Still more has to come, since national and international projects intend to create a super-highway capable of sustaining world-wide exchange of information encompassing multi-media forms of communication.[28] Thus, problems related to intellectual property leave the simple national arena to become cross-national. With the TRIPS agreement of 1993/94, certain steps have already been taken to tackle problems related to copyright infringement; however, the agreement has taken a narrow view to concentrate exclusively on trade-related issues, by the same token disregarding problems of authorship. For instance, on 19 July 1995 the European Commission published a Green Paper which examines the impact of new technologies and the information society on copyright and related rights.[29] Close analysis of the report would be necessary to determine in which terms it addresses the issues. If the

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[27] John Quarterman, *The Matrix: Computer Networks and Conferencing Systems Worldwide*, (Bedford, 1990), at 278, Hereafter: [Quarterman, 1990]

[28] Preliminary Draft Report on the Intellectual Property Rights and the NII, Working Group on Intellectual Property Rights, U.S. Patent and Trademarks Office, (Washington D.C., September 1994); Information Infrastructure Task Force Telecommunications and Information Administration, "*The NII Agenda for Action*", 15 September 1993; "Info Euro Access IMPACT.2 Information Market Policy Actions - Work Programme 1994", Doc. IMPACT 42/93 (EN) final, European Commission, Directorate General XIII-Telecommunications, *Information market and exploitation of research* (2*nd* December 1993); [Quarterman, 1990], at 189.

[29] "The Commission examines the impact of new technologies and the Information Society on copyright and related rights, in a Green Paper published yesterday. [...] The paper considers the need for EU-level measures to address issues related to digitisation, on-line services and the acquisition and protection of rights not covered by the database protection Directive or the other Directives on copyright and related rights.", The Week in Europe, The European Commission, *Copyright in the Information Society*, 20 July 1995.

position of the Commission is based upon the commercial valuation of works of the mind in electronic milieu, future developments of authorship in the field of copyright will be compromised. Emphasis on the personal bond which links the work to its creator needs to be reflected by copyright institutions in electronic milieu.

Indeed, direct implications for resources and materials may be observed. The creative process nourishes itself from other people's works and ideas. Society has found numerous ways to keep records of scientific knowledge, art and other cultural traditions. For centuries, societies entrusted storytellers with the memorisation of their knowledge and traditions. Moving away from oral tradition societies, the printed world placed its knowledge in books along with libraries as the repository of culture. With the rise of information technology, accumulated knowledge has found new repositories such as CD Roms and on-line databases. Digital devices have not replaced printed forms of expression but they have been taking precedence for their storage ability as well as their easy use. Ultimately it may be said that in the near future all forms of information will have their digital version in addition to existing material forms of expression. Nonetheless, it should be stressed that a new era has begun since many works are stored or expressed exclusively in digital form. Because some works originate from information technology, access is limited to the digital environment. For instance, because the public may wish to freely access any types works, digital access may represent the only means to make available these materials. Moreover, digital reproduction of unique collections, available only in certain libraries, will allow researchers to gain direct access at the click of their mouse. As a result, the amount of information available will grow exponentially as well as its use

in all spheres of human activity.[30] Criteria such as location and physical form of the materials are no longer determinant to access information.

Increase in availability has been made possible by the creation of a variety of sophisticated information services. The scope of these services widens public use as well as public access. First, traditional providers of information, such as libraries, have followed the digital trend. Gone are the days when card catalogues used to be the only method of searching for information. Computerised catalogue services have been developed for library users as well as on-line users. For instance, access to the catalogue of the Library of Congress is available through the Internet. Moreover, I have used the term 'catalogue services' since hypertext databases and other interactive multi-media services are available for the search of materials on a national as well as worldwide basis. These new indexes, based upon hypertext systems, combine ideas to allow multi-media searches. Information available can be found in full text, abstract or compounded form. Problems of references, and especially of authorship, arise. As it stands, our current copyright institutions do not provide answers as to how to quote or refer to any works provided on the Internet. Fundamentally, copyright has dictated the way in which people conduct research and position themselves towards knowledge.

In substance, the new facilities transform the way people perform their creative activities. Compared with the centralisation of bookmaking and publishing, which led to the development of copyright, electronic networking speeds up the decentralisation of information distribution and in turn influences the process by which research and art is produced. It should be clear that the technology of mass

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[30] O.T.A., *Intellectual Property Rights in an Age of Electronics and Information* (Washington D.C., 1986), at 146, Hereafter: [O.T.A., 1986]

printing and publishing changed the process of conducting scientific research and scholarship by imposing certain standards for publication. In medieval times, libraries were created to store canonical copies of books for record. They developed systems to classify books in order to facilitate research and duplication of manuscripts. Consequently, validation of knowledge followed a certain system adequate to the research methods of the time.[31] Copyright has departed from that tradition to impose an individualistic form of validation, namely by reference to authorship. With the rise of information technology these traditional methods of recording as well as conducting research are no longer sustainable. Steven Gilbert and Franck Connolly argue in that sense:

> "Since nearly every scientific and technical field is growing and changing much faster than the print publication process can reflect, the real exchange of knowledge occurs long before the publication process. Most scientists must actively seek "preprints" in order to find out the current state of research in their field; the actual publication in printed form only validates the contribution for historical reasons and creates an archive"[32]

Therefore, intellectual property systems, and especially copyright institutions, validate scholarship as well as authorship following certain forms of mechanisms suitable to the printing technology.

It may be contended that copyright has furthered the advancement of knowledge, and therefore its mechanism suits the creative environment. Moreover, an

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[31] In medieval time, anonymity in literature was ignored because the value of literary works was based upon their circulation and regular use as a form of guaranty of authenticity and authority. Scientific works, by contrasts, bore the name of their author as a form of reference which expressed the authority in the field, see Michel Foucault, *What Is an Author?*, trans. Donald F. Bouchard and Sherry Simon, in *Language, Counter-Memory, Practice* (Cornell University Press, 1977), at 126, Hereafter: [Foucault, 1977]

[32] Steven W. Gilbert and Franck W. Connolly, *A Wealth of Notions: Regaining Balance as New Information Technologies Collide With Traditional Controls and Incentives for Intellectual Work*, in O.T.A., *Finding a Balance: Computer Software, Intellectual Property and the Challenge of Technological Change*, (Washington D.C., 1992), at 167, Hereafter: [O.T.A., 1992]

observer may remark that information technology poses problem for that progress. As Ithiel de Sola Pool rightly noted:

> "The proliferation of texts in multiple forms, with no clear line between early drafts and final printed versions, will overwhelm any identification of what is the world's literature"[33]

For instance, interactive computing allows creativity in which a preliminary or final version of a work can be the product of interactions not only between persons but programmed machines.[34] Individualisation and localisation of non-static digital works is made difficult, giving rise to problems of identification. Traditional methods of scholarship require a clear record of each contribution. Research is a personal endeavour, but scientific results need to be made public in order to judge the validity of the work accomplished. Only then can the work be truly validated and made available for others to build upon it. Clearly such a process takes more time than sending electronic messages. Nonetheless, validation as well as securing public records of intellectual materials should pose no technical problems. Truly validation is a matter of recognition among peers, which obeys its own established rules independently of copyright protection. By contrast, claims of authorship are a legal matter which aim at securing protection under copyright. Identification of works of the mind does not necessarily imply authority in knowledge. This is a perception unique to copyright institutions. Protection is either economic or moral. Recognition of authorship may well go along with recognition by peers in the sense that respect of the accuracy and integrity of works are key elements in recognising the commercial

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[33] Ithiel de Sola Pool, *Technologies of Freedom*, (England, 1986), at 212.

[34] Interactive computing include computer-aided design, interactive computer graphics or music, see *Globalization, Technology, and Competition. The Fusion of Computers and Telecommunications in the 1990s*, Stephen P. Bradley, Jerry A. Hausman & Richard L. Nolan ed., (Mass.:Harvard Business School Press, 1993), at 88 [Thereafter: Bradley (1993)]; see [O.T.A., 1986], at 69-70.

value of works of the mind. As such, I venture to say that reliability of these elements is crucial for the survival of on-line services publishing works of scholarly and scientific research. Also, any publishing service which wants to be considered of cultural and commercial interest will regard these elements with the same consideration independently of copyright protection. As opposed to traditional publishing enterprises, the advantage of digital information systems is to facilitate the constant up-dating process of information to the current state of affairs.[35] From all this, it follows that information technology would in fact impose more stringent standards for publication. Above all respect for authorship, under a new form, will be crucial in the emergence of intellectual property rights in electronic milieu. Because research as well as any other creative endeavour is personal, authorship ought to be recognised as an individual and protectable value.

Further consideration needs to be given to the creators themselves. The act of creation or invention can be seen as a complex social process rather than a simple isolated incident. Scholars, poets, writers, artists, and inventors need tools, materials and information resources to perform their act of creation. Any impact observed on these particular elements has a direct effect on the people who are the prime movers in the creative environment. It should be stressed that until recently computer technology was the exclusive field of a technological elite. Certain skills and training as well as expensive computing materials were needed. Nowadays, with the democratisation of computer technology, everyone can have access to computing facilities. Advances in software and hardware have increased access by making computers cheaper and

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[35] Richard Tomkins, *Enter the bespoke newspaper*, Financial Times Monday March 13, 1995, at E-13.

software more comprehensible for the non-computer-literate. Moreover, improvements in the design of interfaces have led to the emergence of networks, fostering the use of computers in all areas of human activities.

Nonetheless, there should be no illusions about the need for training and education in using information technologies, which will be constantly required. Creators will need to learn to use these tools to their fullest capabilities to understand how to find and use information. Training is needed all the more, since these technologies impose their way in all fields of research and in the arts. Incidentally, the necessity to be in possession of all these technical variables will determine and influence greatly the artist's inspiration and motivation to create. As technology becomes more integral to the arts, artists need to be not only creative but also technicians before they can create.

In itself technology is one external factor which has always had a significant impact because it restructures the creative environment in which it is to be used. Some people might find themselves excluded, whereas others might discover latent creative skills. As such, information technology promotes self-expression. Education, training, and reference to previous works as a source of ideas or information, all added to personal thoughts and personal skills, are necessary to perform such acts. Also, interaction with peers and recognition from society favours creativity. Moreover, it should be noticed that information technology affects those involved in the arts or scientific and scholarly pursuits not only on their technical skills but also on how they perceive themselves and what motivates them. Before the press, a manuscript was treated more or less as a sacred text whose author was as much irrelevant as too

difficult to name. By contrast, the printing press gave rise to the concept of the individual creator affecting by the same token how creators were motivated. In enhancing the economic value of their writings, authors became also more concerned about their self-image which in effect conflicted with the stationers' perception of what ought to be writers. In other words, from simple labourers paid by lump sum, authors claimed protection for their authorship. The issue was to determine not only who should benefit from the economic value of their writings but also who ought to be protected for their creative skills.

Information technology poses identical problems but on a larger scale. The new technology influences creators' self-esteem as well as their perception of their own work. Moreover, computers are intrusive as well as projective media. This is an ideal medium in which to create a private world for self-exportation. Not all individuals create in the privacy of their home with the intent to make their work public. Nonetheless, creators need to be aware of who they are, what they want to create, and how they define their relationship with their creations and the remainder of the world. As such, intellectual property ought to recognise such consciousness by rights expressed in terms of authorship balanced by a right of access attributed to society. Expectations from users must balance expectations from creators in order to keep that interaction going between creators and users. From all this it follows that claims over works of the mind need to be reconciled not only in terms of individual claims but also according to society's best interest. The sense of purpose is generally strong among artists and scientists. For instance, scientists generally wish to contribute to the advancement of science and knowledge, and do not try to maintain

exclusive rights on their work. However, such personal motivation needs to be recognised by society. Creators are as concerned about the respect for their creations as about their place in society. Also, commercial pressure affects scientists on how they feel about their work and the reasons they pursue their work and what rewards they expect to gain from it. For instance, problems may arise as to the commercialisation of scholarly results. Universities may benefit financially; however this may conflict with ethics and the public interest. In other words, immediate personal gains may not benefit society in the long run, since it may impede research and scientific progress by means of future gains or applications.

From all this, it follows that there are changes in the ways creators and investors in works of the mind carry out their work. Many powerful new tools combined with new resources enlarge the boundaries of creativity. More importantly information technology opens the way to more people participating in the creative process. The emergence of new opportunities and the changes of players in the creative environment radically transform the environment in which intellectual property, and especially copyright institutions, has hitherto evolved.

### IMPLICATIONS FOR COPYRIGHT INSTITUTIONS

Intellectual property regimes evolve in the political arena. Their goals and mechanisms have taken shape according to society's needs, from historical circumstances as well as political compromises. As a result, copyright may be described as a feedback mechanism which is intended to reach certain goals. In order to help reach these goals, the system produces certain incentives and rewards which

are integrated within a system of operating rules enforced by mechanisms. More importantly,

> "[p]olicy goals are the ends towards which the intellectual property system is directed; they mirror the goals of society. ...time and social change may alter intellectual property goals. As the goals change, other parts of the system are likely to change in response."[36]

The greatest amount of change seems to be taking place in the copyright arena, more than any other intellectual property field.[37] As a matter of fact, copyright has been on the front line because certain industries have sought copyright protection rather than other intellectual property. With the magnitude of the pressure exercised by new technologies, and especially information technology, the goals are ambiguously shifting, according to commercial or political pressure questioning copyright institutions. Moreover, with the rise of the information age more copyright problems are to come. As a response to these changes, the subject matter of copyright regimes has been revised in most developed countries in order to render national legislation technologically neutral. In other words, national legislation has been designed to protect works of the mind regardless of the technology involved in its creation. However, revising copyright in such a manner is forgetting that the subject matter is nonetheless the product of one technology, the printing press.

Moreover, the consensus on which copyright has traditionally rested is deeply affected because society's values have changed along with technological development. Many of the new players, not parties to the agreements of the past, hold different values about who should have access, about what materials should be covered, and

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[36] [O.T.A., 1986], at 21.

[37] Hector L. MacQueen, *Extending Intellectual Property: Producers v. Users*, 45 Northern Ireland Law Quarterly 1994, at 31; Hector L. MacQueen, *Copyright, Competition and Industrial Design*, (David Hume Institute Paper, 1989), at 8.

who should be rewarded for their work. For instance, cross-national exchanges of knowledge among scholars occur daily on computer networks. These exchanges serve the function of a "gift", creating social bonds for the advancement of knowledge without any intention of profitable gains and often by-passing what may be considered national interests.[38] On that specific subject, copyright would then fail to fulfil its role if its goal is to protect cultural and scientific as national interests. This exchange illustrates the emergence of a new sense of privacy among users, as well as a more liberal approach to information access. This new approach is in direct conflict with copyright's mechanisms. As has already been contended, copyright plays the role of an intermediary system which seeks to reconcile divergent private claims to works of the mind in order to facilitate bargaining. Since the invention of reprographic technology, copyright's success in controlling access to tangible media of embodiment has been reduced. Incidentally, information technology has contributed to a greater extent because copyright has simply lost the ability to control access. Accordingly, change in the public's attitude towards copyright has shaken its legitimacy. More freedom is sought to access a wider range of information not only because the value of information in decision-making has increased but also because more people are willing to get informed. With the rise of information technology, more people participate in the creative process, which forges a new attitude towards the use of information and creators of works. People who engage in infringing acts in the

[38] It has to be observed that this "gift culture" is possible only because the rewards of sholarly research are not given by a market. Nonetheless, economic incentives exist in the award of promotion. What must be emphasised is that exchanges occur on a spontaneous and deliberate basis, see Steven W. Gilbert and Franck W. Conelly, *A Wealth of Notions: Regaining Balance as New Information Technologies Collide With Traditional Controls and Incentives for Intellectual Work*, contractor report prepared for Office of Technology Assessment, 1991, in [O.T.A., 1992], at 167.

privacy of their home do so mainly for their personal use. For instance, tape-recording for "time shifting" reflects the need for people to enjoy movies and others programes at more convenient times. Similarly, downloading and possibly printing pictures and texts originating from the Internet are common acts. These acts convey a general acceptance among the public that so long as no profit-making is involved they are not harmful. Also, these acts lead to a greater dissemination of works of the mind. I venture to say that the legitimacy of copyright institutions will most probably rest on a more liberal policy allowing people to access at will any kind of information. Therefore, constraints imposed by copyright will need to be relaxed in order to satisfy society's needs.

In parallel, copyright issues have become a commercial concern, and especially among industries and right owners who depend on intellectual property revenues. As a result, the case for dissemination of products of the intellect and the increase of the public domain have been supplanted by immediate economic interests. Intellectual property, and especially copyright, has been an important public policy tool in balancing creators' economic interests for the greater benefit of society. In an age of information, access to global information resources is a determinant factor for success. The concept of reward and incentive must match the motivations of the people they are designed to influence. They must also accurately reflect the kinds of activities creators pursue. In the light of the effects of information technology on society and the creative environment, particular attention should be given to the scope of protection afforded by copyright. In doing so, what society must be concerned with is the amount, quality and diversity of works produced. Fundamentally, the out-put

generated by the intellectual property system reveals how well the system works. Clearly in discussing intellectual property issues we are discussing the very choices society makes about its cultural and scientific resources as well as its economic future. Therefore, society ought to redefine what are the goals which copyright intends to support in a digital environment. In this fight for property rights, I venture to say that the public is likely to lend support to the intellectual property system which will fit its values, independently of concerns voiced by publishers and creators.[39]

Further, the decision to render the subject matter of copyright technologically neutral may be simply questioned on the ground og its lack of effectiveness. Modern copyright law evolves out of technology. In similar fashion, it can also be claimed that the rise of information technology should evolve new principles as well as a new copyright institution. Moreover, in adapting copyright mechanisms, legislatures have not fundamentally changed the principles which have inspired the mechanisms themselves. As such, these principles are inspired by the goals to act as a constitutional mandate. Any changes to these principles would contravene to that supreme mandate. Prevailing views suggest that copyright principles have proven their flexibility over time and that the current copyright institution can be adapted to encompass new forms of expression in electronic milieu.[40] However, one cannot elude the point that the printing press has given rise to the modern copyright system, and where printing technology is no longer the prime source of communication, then

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[39] [O.T.A., 1986], at 122.

[40] It has been argued that the information superstructure is consistent with traditional copyright concepts and that "issues implicated by the information infrastructure are thus not fundamentally different from those already faced by authors and rightholders [...] in the software arena", see Allen N. Dixon & Laurie C. Self, *Copyright Protection for the Information Superhighway*, 11 European Intellectual Property Review 1994, at 465; [Cavadoz & Morin (1994)] at 47.

copyright should be reconsidered. As Tom Palmer remarked on the relationship between intellectual property rights and technology:

> "If laws are dependent for their emergence and validation upon technological innovations, might not succeeding innovations require that those very laws pass back *out* of existence?"[41]

The fact of the matter is that copyright is the brainchild of certain political and social conditions dependent on one form of technology. Information technology is fundamentally different from the printing press.

To illustrate the truth of this, it is necessary to consider the technical characteristics of information technologies as opposed to mechanical print in relation to copyright mechanisms. The critical feature of information technology is that information is processed in digital form. This means that information is freed from any tangible medium to become electronically fluid. In other words, perfect reproduction may be carried out very easily and at very low cost once in digital form. As a result, possession of canonical works is unnecessary because copies are as good as the original work, so long as they have not been altered beforehand. Therefore possession, even ownership, of the canonical work is irrelevant in order to enjoy the work in its completeness. Paper may well continue to be an important temporary medium, because people tend to prefer the higher contrast in printed form that video screens lack. It is foreseeable, however, that "flat-screen tablets that can be turned over like the pages of a magazine" will probably change this perception.[42] Also, beyond the simple enjoyment of the work, digital modes are more attractive for permanent storage because storage volume is reduced to a minimum along with a

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[41] [Palmer T, 1989], at 273

[42] Richard Tomkins, *Enter the bespoke newspaper*, Financial Times Monday, March 13, 1995, at E-13

superior convenience of access. Consequently, manipulation, storage, processing and on-demand printing can be done with complete accuracy by any owner of a personal computer.

So far I have confined my analysis to copyright law. Nonetheless, that analysis can be partially extended to *droit d'auteur*. What I have contended is that the fundamental principles upon which *droit d'auteur* has been elaborated are independent from any form of technology. However, the mechanisms, and especially most applicable doctrines, have been influenced by the printing press. Accordingly, *droit d'auteur* recognises authors as such, and especially authorship as inherent from the act of creation. Therefore, authorship needs no economic as well as technological excuses to be recognised. Nonetheless, since the fruition of authorship allows society to further its own intellectual development, it is necessary to balance the rights which evolve from that function by the prinicple of public domain. Such principles, authorship and public domain, permit society to recognise itself in its authors since the creative process evolves from a certain societal environment and guaranty to each individual the possibility to participate in creative process. As a matter of fact, authorship is society reflected in its authors. Since authorship gives rise to special rights attributed directly to authors or individuals, it has been necessary to create a boundary such as intellectual property in the form of the public domain. This principle guarantees that authorship remains a principle which comes from society even though society let individuals hold intellectual property rights on their creation. What needs to be emphasised is that without society, authors cannot create but society itself could not further its intellectual development without recognising people, who more than

others, are the cultural and scientific voice of society. In that sense, copyright as a direct descendent of a certain technological and economic environment cannot in its principles survive in the new creative environment as defined by Peter Drucker as a collectivist community limited by individual claims. I argue that only the substance of *droit d'auteur* is valid in electronic environment as opposed to its current application. I believe that the substance of *droit d'auteur* as elaborated by Lakanal and Le Chapelier gives solid grounds for a new definition of authorship.

The technical consequences of the facts I have just mentioned imply that information in digital form is much harder to control. That capacity along with the private nature of possible infringements poses problems as to the enforcement of copyright against the derivation of single or multi-media works. Digital forms keep the content but not the physical form of the work. Thus, the use of the information contained is facilitated. Copyright enforcement in the early print environment was relatively easy. Copy by hand was not a major problem because it was not a viable means of competing with copyright holders' commercial interests. New technologies have made it easier to reproduce works and harder to monitor use. The critical aspect of copying is whether it displaces a sale of a copy or not. It is difficult to assess the economic impact of unauthorised copying of text, graphic, audio and video work by xerographic and taping technologies. Nevertheless, it does not seem to represent a serious threat to the economic viability of general interest book, magazines, or newspapers.[43] It has already been argued that certain industries more than others have

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[43] In *Scotsman Publications Ltd. v. John Edwards Advertising Ltd.*, Edwards Ltd distributed a daily service of cutting services of articles which has appeared in the Scotsman newspaper. "The service was distributed *inter alia* to an airline which made it available to passengers flying between the U.K. and North Sea Oil installations.", Session Cases 1980, at 308-311; see also court report, Hector L.

a desperate need for copyright protection, solely for revenue purposes, not for authorship concerns. For my part, concerns have mainly to be expressed about scholarly and artistic endeavours. Moreover, the case of access to works of the mind is highlighted in particular by the creation of derivative works. A short extract or segment of a work without any alteration or addition may well be considered an infringement depending on the circumstances or context in which they are reproduced. Moreover, derivative works may look different from canonical works because their format or other features look different; however, they could be disguised derivative works since digital technologies make it easy to manipulate works. There are difficulties in defining the skills, labour, and judgement involved in the collation of information and the creation of the new work.

Like the printing press, information technology brings not only economic changes but also social, cultural and political changes. Indeed, "[t]he fact that identical images, maps, and diagrams could be viewed simultaneously by scattered readers constituted a kind of communications revolution itself."[44] Similarly, as I have already argued, information technology brings many more opportunities. Nonetheless, the most striking aspect of such a revolution is that information technology supports some of the qualities of an oral culture.[45] Clearly, it breaks away from printed materials to

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MacQueen, *Copyright in future publications*, 30 Journal of the Law of Scotland 1985, at 198-199; At a larger scale, Chinese and U.S. trade official averted a trade war with an agreement, early in February 1995, on stopping Chinese piracy of U.S. movies, music and other goods. Although the $1 billion represents a small fraction of the $45 billion worth of goods the two countries trade between themselves in 1994, Agence Press.

[44] Elizabeth L. Eisentein, *The Printing Press as an Agent of Change: Communications and Cultural Transformation in Early Modern Europe*, Vol.1,(Cambridge University Press, 1979), at 36.

[45] Steven W. Gilbert & Franck W. Conelly, *A Wealth of Notions: Regaining Balance as New Information Technologies Collide With Traditional Controls and Incentives for Intellectual Work*, contractor report prepared for the Office of Technology Assessment (Washington D.C., 1991), cited in [O.T.A., 1992], at 167.

favour direct electronic communications in a manner similar to oral discourse as observed in Ancient Greece. Modern copyright conveys the principle that the market place is allowed to define information solely as a monopolised commodity. This means that the system of dissemination of ideas and subsequent intellectual innovation would simply break down without any monopolised commodities to trade. By contrast, information technology recreates an environment where instant communication facilitates exchange of ideas among people and consequently furthers progress. As a result, markets depending on copyright protection have become directly affected since digital form of expression threatens printed commodities, namely the products of the printing press.

Clearly, copyright institutions are not fit to respond to the needs of society in electronic milieu. Beyond the mechanisms, the goals need first to be redefined by society, in order then to define proper mechanisms. The inescapable conclusion which emerges is that the concepts of authorship and ownership in products of the intellect have lost legal support. Ultimately, then, it could mean the "death of the author" along with copyright.[46] Furthermore, in discussing the future of copyright one is clearly faced with two positions. A romantic approach presents copyright as a means to protect freedom of expression traduced by greater creation and dissemination of new ideas. This is what Mark Rose characterised as "[t]he eigtheenth-century discourse of original genius [which] can be understood as an anticipation of romantic doctrines of creativity."[47] A second one looks at copyright in a more pragmatic fashion as a form

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[46] Lionel Bently, *Copyright and the Death of the Author in Literature and Law*, 57 The Modern Law Review 1994, at 973-986.

[47] Mark Rose, *Authors and Owners. The Invention of Copyright*, (Cambridge, Mass.: Harvard University Press, 1993), at 131.

of protection within the industry. Both approaches refer to authorship as a means of appropriation. Here lies the dilemma. The problem is to determine what authorship ought to refer to in an age of information technology in order to determine adequate rules for intellectual property. In characterising authorship, one is actually setting the track for policy goals towards which the intellectual property system is directed. They will mirror the goals of society in the information age.

### THE GREAT QUESTION OF AUTHORSHIP

Copyright law, and especially *droit d'auteur*, substantiates a certain concept of authorship. Without it, no proprietary rights on works of the mind can be sustained. Because intellectual property is the product of social interaction, the concept is determined according to the perception held by society on the role of creators and their contributions in society. The invention of the press in the fifteenth century established a transitional step in society's perception of authorship. Before, no individual responsibilities or initiatives were to be recognised; therefore literary responsibility or creativity could not be assumed by authors as single individuals.[48] For instance the tapestry of *Bayeux*, as well as the stained glass of a medieval cathedral, embody the values and conceptions not of individuals but of an entire community. The printing press gave an intellectual impulse, breaking away from a

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[48] "As Elizabeth Eisenstein has demonstrated '[s]cribal culture could not sustain the patenting of inventions or the copyrighting of literary compositions. It worked against the concept of intellectual property rights.' With the typographical fixity and attribution made possible by printing, authorship became a matter of personal responsibility, and respect for the 'wisdom of the ages' correspondingly declined", see Tom G. Palmer, *Intellectual Property: A non Posnerian Law and Economics Approach*, 12 Hamline Law Review 1989, at 272.

sense of community which embraced cultural and scientific endeavours.[49] In parallel, intervention from political authorities was sought by printers and booksellers to legitimate their ownership in copies in order to prevent piracies, and because copies represented considerable investments. Intervention was two-fold. Authority decided to intervene in economic affairs to support the new technology and protect the developing book trade by means of book privileges; but soon it became interested in controlling the printing press as a means of censorship. Moreover, as has been contended, the printing press brought altogether economic, political, and social changes. As a result, authorship is a reflection of these changes whereby the term is associated with respect for individual property rights vested in creators on a special kind of commodity, creators being the source of this commodity. Clearly, "we are the heirs of the institution of literary property created in the eighteenth century".[50]

The early institution of literary property expanded to give rise to other forms of property, like charts and maps. Similarly the concept of authorship embraces many forms of expression. As a matter of fact, two modern concepts of authorship should be recognised. As I have already argued, both concepts look similar in vesting ownership on their work, but in authors they support two fundamentally different approaches to intellectual property rights. In 1774 the House of Lords, court of final appeal in the United Kingdom, heard the great question of literary property, the case *Donaldson v. Becket* which was to become the underlying principle of modern Anglo-

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[49] Robert K. Heldman, T.F. Madison & T.A. Bystrzycki, *Future Telecommunications. Information Applications Services, & Infrastructure*, (McGraw-Hill, 1993), at 7-15.

[50] Mark Rose, *Authors and Owners. The Invention of Copyright*, (Cambridge, Mass.: Harvard University Press, 1993), at 130.

American copyright law.[51] The Lords decided that authors, and their assigns, have a temporary privilege established by the 1710 Statute of Anne (8 Anne c.21) of printing and disposing of copies. The simple act of granting a privilege of ownership institutionalised creators as owners or investors in their own creative labour. By contrast, the 1793 French *déclaration des droits du génie* conceptualises authorship as a recognition of creators' ownership in the expression of their personality.[52] Both systems intend in their own way to encourage "Learned Men to Compose and Write useful Books" or further the citizens' enlightenment in terms of education and encouragement of knowledge.[53] Even though creators are the centre of attention in both systems, they are conceptually constructed on different grounds to represent two different legal traditions. This is of fundamental importance in analysing the viability of copyright law and *droit d'auteur* in electronic milieu.

The concept of authorship was prompted into existence by the emergence of the printing press, enabling a central authority to support authorship. Not only did the development of the printing press lead to the creation of copyright, but it led people to think of creative expressions as property. In other words, the printing press gave us the opportunity to initiate the creation of copyright as a legal institution and to establish by the same token the very substance of the doctrines on intellectual property. Property right, whether tangible or intangible, needs boundaries. Ownership in intellectual property is defined in terms of intangible characteristics. Unfortunately,

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[51] *Alexander Donalson, and another v. Thomas Becket and others*, II Brown 133, 1 Eng.Rep. 846.

[52] Lakanal, *La déclaration des droit du génie*, Le Moniteur Universel 21 July 1793.

[53] "An Act for the Encouragement of Learing, by vesting the Copies of printed Books on the Authors or Purchasers of such Copies, during the Times therein mentioned", 8 Anne c.21, Statutes At Large, at 417.

information technology has disrupted these traditional proprietary boundaries and control over them. These observations are reflected in legal theory by the idea-expression dichotomy, rationalised by the concept of originality which moulded the doctrine in copyright law.[54] Ideas, as such, are neither patentable or copyrightable. Monopoly in ideas is against the very purpose intellectual property rights seek to promote. Authorship has become a matter of personal responsibility, initiated with fixed mediums of original expression made possible by printing technology, and rewarded by the copyright regime in relation to its dependence with the technology that makes creation possible. As a direct successor of the licensing mechanism, copyright institutions still represent a form of state and societal constraint. It may be argued that copyright allows the suppression of freedom of speech as a whole. As Reichman observed:

> "In practice, the exclusive rights of copyright law provide a successful reward only to those authors and artists who successfully explore the public's taste."[55]

Certain works of the mind succeed in capturing society's attention. Some scholars advocate that people do what comes naturally and then invent some theory to make their effort plausible.[56] What would come naturally to copyright is the deliberate or selective suppression and advancement of speech. For instance, copyright limits the essence of the creative process by penalising unconscious infringement, or simply inhibits creation of derivative works or inventions which rely on deliberate imitation

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[54] Amaury Cruz, *What is the Big Idea Behind the Idea-Expression Dichotomy - Modern Ramifications of the Tree of Porphyry in Copyright Law*, 18 Florida State University Law Review 1990, at 221-249.

[55] J.H. Reichman, *Legal Hybrids Between the Patent and Copyright Paragigms*, 94 Columbia Law Review Dec. 1994, at 2438.

[56] David Lange, *At Play in the Fields of the World: Copyright and the Construction of Authorship in the Post-Millenum*, 55 Law and Comtemporary Problems 1992, at 142.

or improvement of previous works. The mechanism of suppression has relied on the concept of authorship.

In his seminal 1969 essay, "What is an Author?", Michel Foucault characterised authors as "author-function".[57] An "author" represents a particular type of legal codification as a form of appropriation. This situation allows the determination of what is "lawful" and "unlawful" as well as control of the use of appropriated forms of expression.[58] Authors represent ideological figures by which one marks the manner in which we fear the proliferation of meaning. The assignment of an "author" as a name contributes to the valorisation of intellectual materials by means of individualisation. In other words, elements composing intellectual materials traduce the personality of the "named" author. Foucault argues that authors are "tied to the legal and institutional systems".[59]

It has been contended that intellectual property, as an institutional system, is the creation of one technical culture, the printing press. Accordingly, the rise of new communication technologies, such as information technology, may be considered as a death warrant for authors. The institutional as well as the technical connection between copyright law and authorship would then support the opinion that "authors", as a function, could not be sustained in the electronic milieu. By contrast, *droit d'auteur* represents a fundamental right recognised by law, independently of any form of technology or specific form of expression, as long as it fulfils the test of "personality". Following this line of thinking, authorship is free from any technical

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[57] [Foucault, 1977], at 124.

[58] Determination of "religious" or "blasphemous", "sacred" or "profane" is greatly facilitated by assignment of an "author", [Foucault, 1977], at 124.

[59] *ibid*, at 130.

form of communication. Although this specific concept of authorship may be applicable in electronic milieu, its current application, as has been explained (see chap 3 at 114-115), respond to a certain technology, the printing press. Consequently, it is not under a similar form that authorship will survive. Also, intellectual property is established as a form of constraint by the state; its disappearance would signify a new era where "authorship" and thus creativity are beyond the reach of constraint. This means that creativity will play a key role in the determination of authorship away from any function of production or transformation and form of appropriation.[60]

Authorship will then survive in a more personal manner, away from the state's authority. Since the current intellectual property system may vanish, we need to understand how the goals defined by society will be reached. Is there a need for incentives? It has already been contended that publication in the information infrastructure will be met by direct economic claims. Therefore it may be the death of "authors" as a determined function which pertains to a form of intellectual property, but certainly not the death of creators. On the contrary, I would insist upon the fact that, having more tools and resources to build upon, creators will enhance their creativity. Also, authorship will survive in a more personal form, away from any constraining figure of societal or state authority. Nonetheless, I venture to say that personal authorship does not exclude anonymity as perceived in medieval times, because information technology sweeps away all resistance to meaning and all constraints beyond the individual authorship. In *De Viris Illustribus*, Saint Jerome

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[60] Jessica Litman, *The Public Domain*, 39 Emory Law Journal 1990, at 1023, cited in Mark Rose, *Authors and Owners. The Invention of Copyright*, (Harvard University Press, 1993), at 133.

maintains that homonymy is not proof of common authorship.[61] Similarly criteria such as quality, theoretical coherence, and style may define a new form of discourse whereby authorship does not refer as such to an author's name. Creators of all kind will therefore not be "flatly equated in the law, as an equation of rights."[62] Emphasis is put on differentiation among contributions where names becomes incidental. Only imprints of creators will remain. Molly Nesbit questioned whether culture in a printed world is flat as a book.[63] As such, the printed work may have been flat in that sense that authorship has been a reflection of a certain legal framework emerging from one culture. Authorship has been simultaneously an artefact of the market place where books as cultural commodities are exchanged and authors have a function in society. In that sense, culture may have been flat or at least constrained by society to the open exploitation of "culture" by an industry. A new definition of authorship ought to detache itself from such economic influence to let the many different creative experiences emerge. Economic variables become consequently secondary points to the act of creation. Culture is not expressed anymore in terms of marginal units of production but in terms of freedom of creativity and expression which ought to be protected for their knowledge or cultural value.

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[61] St. Jerome, *De Viris Illustribus*, cited in [Foucault, 1977], at 130.
[62] Molly Nesbit, *What Was an Author?*, 73 Yale French Studies 1987, at 230.
[63] *ibid*, at 235.

# *Conclusion*

The intention of this research has been to determine the fundamental rationales and subsequent principles of copyright law and *droit d'auteur* in order to demonstrate that both mechanisms are not viable in the light of information technology. Moreover, the analysis is directed towards the determination of the emergence of intellectual property rights as a social construct in relation to technological change. To that effect, the real purpose of the exercise has been to analyse the interrelation between the different elements which compose intellectual property systems, in order to define what is the future of intellectual property, or authorship, in electronic milieu.

In order to conclude on that specific issue, it is worth citing Neil Turkewitz' view on the subject matter. Careful attention should be given to the fact that Tirkewitz refers to "authors' rights" as the natural and inalienable rights of natural persons to control the uses of the fruits of their creative processes In other words, Turkewitz looks at the fate of *droit d'auteur* in the light of technological change.

> "Authors' rights are dead. This is a radical and controversial observation on today's environment but a necessary starting point. Author's rights are a product of 18th and 19th Century romanticism and should now only serve as an indication of how far we have come. Our views of the place of art in society, of creativity in the marketplace, and ultimately of the value of freedom of expression, require us to reject the elitism inherent in copyright systems based on the natural rights of authors.
>
> I am drawn to this conclusion by two somewhat unconnected lines of thought. The first is that protection based on the natural rights of authors fails to consider the interests of society with respect to access to creative works. It is amoral and asocial. The second thought is that author-based protection has failed to provide an adequate legal structure for dealing with the strains on copyright resulting from advances in technology. Authors' rights are premised on the ability of the author to

> control reproduction and distribution. Modern technology has rendered such a premise untenable.
>
> What is presently required is a radical reassessment of societal objectives in the protection of intellectual property - to directly address the fact that our copyright laws are a statement of our social policies. The debate has for too long taken place in the darkness of museums instead of the light of the market place."[1]

Clearly, in the light of the findings of the thesis, such contention show complete misunderstanding of the rationales as well as the principles of *droit d'auteur* and their relationship with technical change.

The rationales of copyright law evolved from one specific technology, the mechanical press. More generally, authors are perceived as investors in their own works in the form of commodities. As a result, two principles have been developed. Since works of the mind have the particularity to be non-appropriable, copyright law grants monopoly rights in order for individuals to invest in such works. Rationally it can be understood that property rights cannot arise without the existence of a public domain from which people can draw new works. Such principles mirror society's goal, which is the dissemination of works of the mind, towards which the mechanism is directed but in compliance within a defined technological environment. As such the doctrines of the idea-expression dichotomy as well as originality ensure that the goal is reached. For instance, the doctrine of idea-expression dichotomy ensures that no-one can restrict access to ideas, blocking by the same token free markets as well as the dissemination of ideas under the form of oligopolies. Consequently, it may be contended that copyright as a form of property has simply replaced the term privilege. In other words, in granting property rights to authors the state confers upon creators of

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[1] Neil Turkewitz, *Authors' Rights are Dead*, 38 Journal of the Copyright Society of the U.S.A. 1990, at 41, cited in Adolf Dietz, *Copyright in the Modern Technological worls: A Mere Industrial Property Right?*, 39 Journal, Copyright Society of the U.S.A. 1991, at 84.

works of the mind the right to put their creations on the market first. Further this property right takes the form of a temporary monopoly determining a bundle of rights vested in the copyright owner. Inherently, copyright protects commercial value in order to pursue society's goal, and not any personal bond which may exist between an author and his creation.

By contrast, *droit d'auteur* seeks to protect the educative value of works of the mind. *Droit d'auteur* rests upon the recognition of authors' contribution in society in order to further the republican enlightenment. Moreover, the purpose is to protect authors for the greater benefit of society's cultural and scientific wealth, analysed in terms of public domain. Therefore, *droit d'auteur* recognises authors as proprietors in the expression of their creativity. As a matter of fact, in recognising authors, society recognises what belongs to human kind and ought to be in the public domain. Thus, authors cannot be investors in their own work but society itself. Proprietary rights vest in authors as the repository for society's cultural and scientific future. This link between society and creators cannot be founded upon commercial interests rather than the intimate bond which links the author to his creation. This principle does not contradict society's claims on works of the mind. On the contrary, it reinforces it, since the creative process evolves from the interaction which exists between creators and the public. As Lakanal contended, attribution of proprietary rights to authors in works of the mind could not harm the goals that the new Republican society set itself. Thus, the public domain has its importance. From these rationales evolve two main principles, joined by another one due to the technological environment. Proprietary rights spring from the principle of authorship and are balanced by the principle of

public domain. Since publishers meet the same difficulties in appropriating the value of publications a third principle of a monopolistic nature is added. Here lies the two fundamental sets of *droit d'auteur*. The first two principles generate inalienable rights, called moral rights, which are attributed to creators on behalf of society. The last principle which is balanced by the principle of the public domain represents the economic rights attributed to copyright owners. It should be clear that such monopolistic rights evolve from the press and not from the fundamental rationales of *droit d'auteur*. This simply proves the inherent flexibility of *droit d'auteur* rationales to mirror the technological requirements in which works of the mind are processed.

Nonetheless, introduction of monopolistic economic rights produces negative effects if not properly balanced by the principle of public domain. As such, the dilemmas of the U.S. copyright system as well as computer programs illustrate clearly the problems which face both copyright systems. Commercial value tends to pervert intellectual property systems, and especially copyright protection, when economic forces become stronger than the goals towards which both systems aim. Accordingly, technological change, and especially information technology, has simply exposed in a more direct fashion the limits of the current copyright institutions. Both systems have been set up to espouse the needs of the one specific technology. The time has come to adapt intellectual property to the information age. In recognising the rationales as well as the principles which direct the mechanisms, adequate mechanisms may be developed to respond to technological change. However, as opposed to *droit d'auteur*, the rationales as well as the principles of copyright law are directly exposed to technological change. By contrast, the fundamental rationale of French author's rights,

and to a large extent its following principles, can originate mechanisms which may fit information technology. Moreover, as technology changes, society's expectations change. The general goal has been to further enlightenment, in other words to increase the public domain. Society is asking the legislators to open more widely access to the public domain.

Accordingly, the concept of authorship will need to change. Its current usage as an author, or one single individual, who is solely responsible for the production of a unique work needs to be reassessed. As such, *droit d'auteur* rationales are able to bring answers to the problem. As contended, authorship is a reflection of society's needs to entrust individuals with the cultural and scientific future of society. With the rise of information technology, the concept of authorship which regarded an author as a distinct entity personally responsible for his creations is giving way to a more communal conception of the term. As a matter of fact, since society is asking for more room to express itself, and thus access works of the mind, it is logical that the current restrictive and economic concept of authorship enlarges itself to embrace creativity in a more dynamic way. Also, this new concept of authorship goes along with a new economic approach, namely a return to the dynamic emergence of intellectual property rights. In such a fashion, intellectual property liberates itself from direct economic concerns to concentrate on the protection of works as form of expression. As a result, it is within the realms of authorship, as defended by Le Chapelier and Lakanal, that the future of intellectual property right lies. Intellectual property rights can be neither substitutes for consensual markets nor market guardians of the cultural and scientific domain. Both ought to work together without impeding each other.

Therefore, in the light of information technology, a broader view ought to be taken in approaching the concept of authorship in order to let markets do their magic in the privacy of people's home as well as guarantee access to a larger public domain.

Authorship is not dead, rather alive and well.

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# *Glossary of Internet Terms*

**ARPANet** (Advanced Research Projects Administration Network)
The precursor to the Internet. Conceptualised by the Rand Corporation and developed in the late 60's and early 70's by the US Department of Defense as an experiment in wide-area-networking that would survive a nuclear war. *See Also*: Internet

**Backbone**
A high-speed line or series of connections that forms a major pathway within a network. The term is relative as a backbone in a small network will likely be much smaller than many non-backbone lines in a large network. *See Also*: Network

**BBS** (Bulletin Board System)
A computerized meeting and announcement system that allows people to carry on discussions, upload and download files, and make announcements without the people being connected to the computer at the same time. There are many thousands (millions?) of BBS's around the world, most are very small, running on a single IBM clone PC with 1 or 2 phone lines. Some are very large and the line between a BBS and a system like CompuServe gets crossed at some point, but it is not clearly drawn.

**Client**
A software program that is used to contact and obtain data from a Server software program on another computer, often across a great distance. Each Client program is designed to work with one or more specific kinds of Server programs, and each Server requires a specific kind of Client. *See Also*: Server

**Cyberspace**
Term originated by author William Gibson in his novel "Neuromancer", the word Cyberspace is currently used to describe the whole range of information and multi-media resources available through computer networks.

**E-mail** (Electronic Mail)
Messages, usually text, sent from one person to another via computer. E-mail can also be sent automatically to a large number of addresses (Mailing List). *See Also*:, Maillist

**Ethernet**
A very common method of networking computers in a LAN. Ethernet will handle about 10,000,000 bits-per-second and can be used with almost any kind of computer. See Also:, LAN

**FTP** (File Transfer Protocol)
A very common method of moving files between two Internet sites. FTP is a special way to login to another Internet site for the purposes of retrieving and/or sending files. There are many Internet sites that have established pubicly accessible repositories of material that can be obtained using FTP, by logging in using the account name "anonymous", thus these sites are called "anonymous ftp servers".

**Gateway**
The technical meaning is a hardware or software set-up that translates between two dissimilar protocols, for example Prodigy has a gateway that translates between its internal, proprietary e-mail format and Internet e-mail format. Another, sloppier meaning of gateway is to describe any mechanism for providing access to another system, e.g. AOL might be called a gateway to the Internet.

**Gopher**
A widely successful method of making menus of material available over the Internet. Gopher is a Client and Server style program, which requires that the user have a Gopher Client program. Although Gopher spread rapidly across the globe in only a couple of years, it is being largely supplanted to Hypertext, also known as WWW (World Wide Web). there are still thousands of Gopher Servers on

the Internet and we can expect they will remain for a while. *See Also*: Client , Server , WWW , Hypertext

**Host**
Any computer on a network that is a repository for services available to other computers on the network. It is quite common to have one host machine provide several services, such as WWW and USENET. *See Also*: Node , Network

**HTML** (HyperText Markup Language)
The coding language used to create Hypertext documents for use on the World Wide Web. HTML looks a lot like old-fashioned typesetting code, where you surround a block of text with codes that indicate how it should appear, additionally, in HTML you can specify that a block of text, or a word, is "linked " to another file on the Internet. HTML files are meant to be viewed using a World Wide Web Client Program, such as Mosaic. *See Also*: Client , Server , WWW

**HTTP** (HyperText Transport Protocol)
The protocol for moving hypertext files across the Internet. Requires a HTTP client program on one end, and an HTTP server program on the other end. HTTP is the most important protocol used in the World Wide Web (WWW). *See Also*: Client , Server , WWW

**Hypertext**
Generally, any text that contains "links" to other documents - words or phrases in the document that can be chosen by a reader and which cause another document to be retrieved and displayed.

**Internet** (Upper case I)
The vast collection of inter-connected networks that all use the TCP/IP protocols and that evolved from the ARPANET of the late 60's and early 70's. The Internet now (July 1995) connects roughly 60,000 independant networks into a vast global internet. *See Also*: internet

**internet** (Lower case I)
Any time you connect 2 or more networks together, you have an internet - as in inter-national or inter-state. *See Also*: Internet

**IP Number**
Sometimes called a "dotted quad". A unique number consisting of 4 parts separated by dots, e.g. 165.113.245.2 . Every machine that is on the Internet has a unique IP number - if a machine does not have an IP number, it is not really on the Internet. Most machines also have one or more Domain Names that are easier for people to remember. *See Also*: Internet

**LAN** (Local Area Network)
A computer network limited to the immediate area, usually the same building or floor of a building. *See Also*: Ethernet

**Maillist** (or Mailing List)
A (usually automated) system that allows people to send e-mail to one address, whereupon their message is copied and sent to all of the other subscribers to the maillist. In this way, people who have many different kinds of e-mail access can participate in discussions together.

**Modem** (MOdulator, DEModulator)
A device that you connect to your computer and to a phone line, that allows the computer to talk to other computers through the phone system. Basically, modems do for computers what a telephone does for humans.

**Network**
Any time you connect 2 or more computers together so that they can share resources, you have a computer network. Connect 2 or more networks together and you have an internet. *See Also*: Internet

**Newsgroup**
The name for discussion groups on. *See Also*: Usenet

**Node**
Any single computer connected to a network. *See Also*: Network , Internet , internet

**TCP/IP** (Transmission Control Protocol/Internet Protocol)
This is the suite of protocols that defines the Internet. Originally designed for the UNIX operating system, TCP/IP software is now available for every major kind of computer operating system. To be truly on the Internet, your computer must have TCP/IP software. *See Also*: IP Number , Internet

**Terminal**
A device that allows you to send commands to a computer somewhere else. At a minimum, this usually means a keyboard and a display screen and some simple circuitry. Usually you will use terminal software in a personal computer - the software pretends to be ("emulates") a physical terminal and allows you to type commands to a computer somewhere else.

**Terminal Server**
A special purpose computer that has places to plug in many modems on one side, and a connection to a LAN or host machine on the other side. Thus the terminal server does the work of answering the calls and passes the connections on to the appropriate node. Most terminal servers can provide PPP or SLIP services if connected to the Internet.

**URL** (Uniform Resource Locator)
The standard way to give the address of any resource on the Internet that is part of the World Wide Web (WWW). A URL looks like this:

http://www.matisse.net/seminars.html
or news:new.newusers.questions, etc.

The most common way to use a URL is to enter into a WWW browser program, such as Netscape, or Lynx. *See Also:*, WWW

**Usenet**
A world-wide system of discussion groups, with comments passed among hundreds of thousands of machines. Not all Usenet machines are on the Internet, maybe half. Usenet is completely decentralized, with over 10,000 discussion areas, called newsgroups. *See Also*: Newsgroup

**WAIS** (Wide Area Information Servers)
A commercial software package that allows the indexing of huge quantities of information, and then making those indices searchable across networks such as the Internet. A prominent feature of WAIS is that the search results are ranked ('scored") according to how relevant the "hits" are, and that subsequent searches can find "more stuff like that last batch" and thus refine the search process.

**WWW** (World Wide Web)
Two meanings - *First*, loosely used: the whole constellation of resources that can be accessed using Gopher, FTP, HTTP, telnet, Usenet, WAIS and some other tools. *Second*, the universe of hypertext servers (HTTP servers) which are the servers that allow text, graphics, sound files, etc. to be mixed together. *See Also:*, FTP , Gopher , HTTP , URL , WAIS